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1986 REPORT ON OHIO MINERAL INDUSTRIES

WITH DIRECTORIES OF REPORTING COAL AND INDUSTRIAL MINERAL OPERATORS

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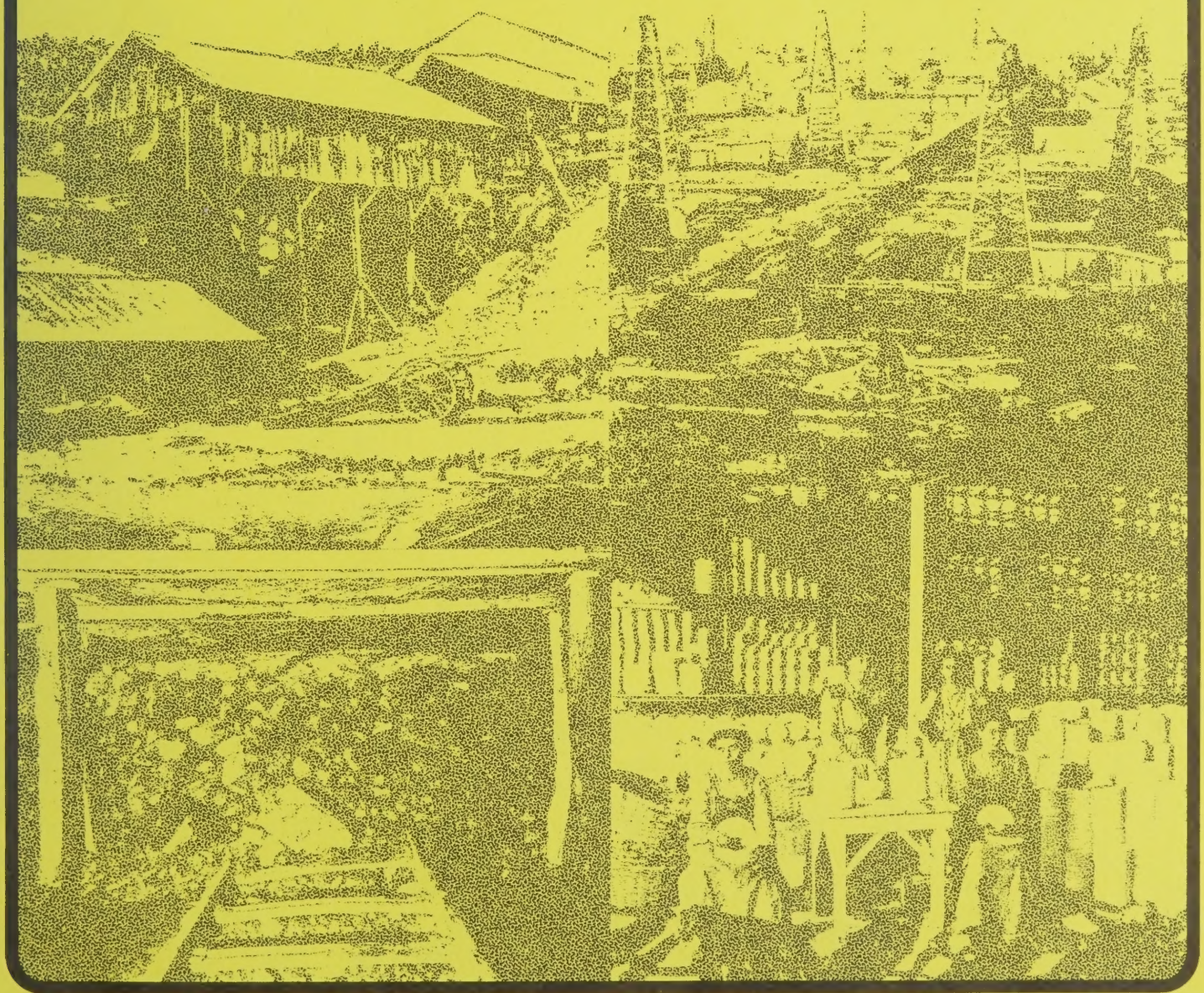

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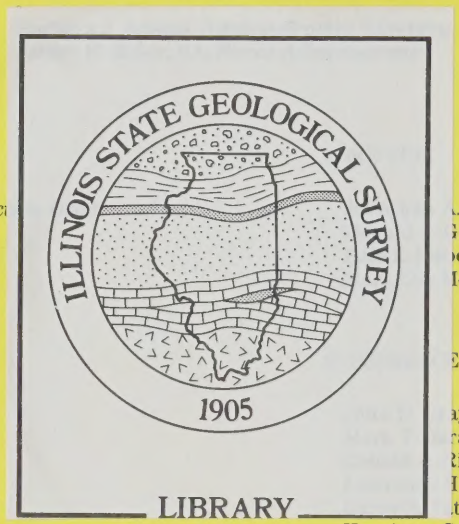

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1986 REPORT ON OHIO MINERAL INDUSTRIES

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COAL AND INDUSTRIAL MINERAL OPERATORS

compiled by

Sherry L. Weisgarber

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Cover photos, clockwise from upper left: Hecla iron furnace, Lawrence County, late 1800's; oil derricks at Cygnet, Wood County, 1885; pottery at East Liverpool, Columbiana County, 1800's (courtesy of Ohio Historical Society); underground coal mine, location and date unknown

FOREWORD

The 1986 *Report on Ohio mineral industries* commemorates the Division of Geological Survey's Sesquicentennial Year with a special article on the history of the mineral industry in Ohio. Photographs of the mineral industry also are included throughout this year's report, which has a number of significant changes from the 1985 report. These changes affect one table, three directories, the commodity summaries, the state commodity maps, the commodity sales and value graphs, and the numerical index of operators of mines shown on the 1986 *Mineral industries map of Ohio.*

This year table 9, *Dollar value of coal at mine, by county and mining method*, includes the totals of the tonnage sold and the value at mine, by county. The alphabetical directory of reporting producing coal-mine operators, the directory of reporting coal-washing plants and associated facilities, and the alphabetical directory of industrial-mineral mine operators all include the name of the president, owner, or manager of each company. The alphabetical directory of industrial-mineral mine operators also now includes the production of each commodity by mine, as well as sales. These production figures reflect what the operators have reported. If an operator did not report production, but did report production employees and days which the commodity was produced, the production was assumed to equal the sales. Also this year the commodity summaries now give the number of companies which sold or produced each commodity along with the number of mining operations. The state commodity maps have been enlarged and symbols rather than patterns have been used to denote the tonnages sold from each county. One additional state map, the *Summary of new oil and gas well drilling in 1986*, has been included in this year's report. The commodity sales and value graphs have been reduced in size so they fit beside their respective state commodity maps. The *Numerical index of operators of mines shown on the 1986 mineral industries map of Ohio* this year includes the abbreviation of the county where the mine is located.

Some of the changes indicated above were made as a result of comments received from users of past reports. All of these changes were made to increase the usefulness of the report to the public. We continue to solicit comments on how this report can be made to better serve those interested in mineral products in Ohio.

Horace R. Collins
Division Chief and
State Geologist

Errata for
1985 report
now available
upon request

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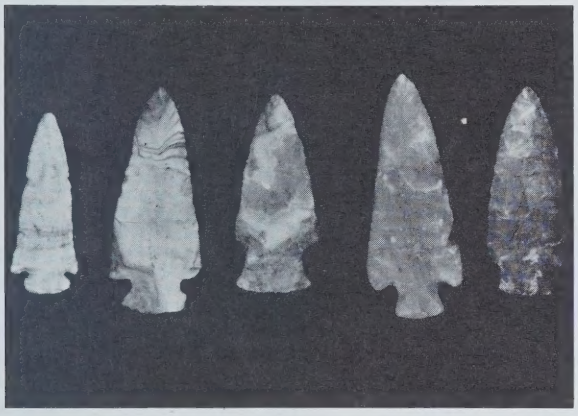
A HISTORICAL SKETCH OF THE MINERAL INDUSTRIES IN OHIO

by Horace R. Collins
Division Chief and State Geologist
Ohio Department of Natural Resources, Division of Geological Survey

The Ohio Division of Geological Survey is celebrating the 150th anniversary of its inception in 1837. The Survey's Sesquicentennial Year seems an appropriate time to review briefly the history of mineral production in Ohio. The Geological Survey, from its foundation to the present time, has played a major role in providing data and technical assistance for the economic development of Ohio's mineral resources. Indeed, one of the primary reasons for establishing a geological survey in 1837 was to aid in the development of our resources and to provide objective data to protect citizens against various types of frauds and schemes involving minerals.



Indian arrowheads of Ohio flint

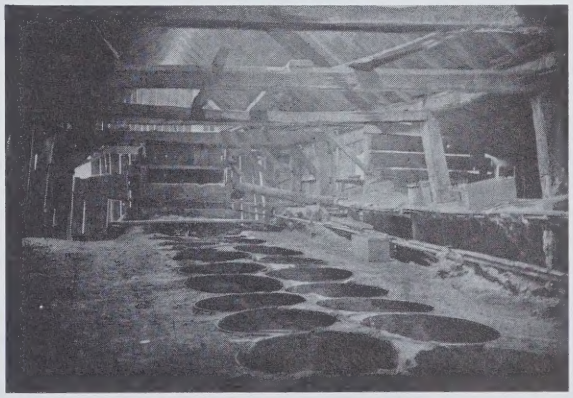
FLINT

Ohio has a long history of mineral production—a history so long, in fact, that it is unknown when minerals were first produced. Aboriginal Americans had exploited native raw materials long before the advent of the first European settlers. American Indians carried on extensive quarrying in the Pennsylvanian-age Vanport flint in the area now known as Flint Ridge, in Licking and Muskingum Counties. An area of several hundred acres underlain by flint up to 10 feet thick was worked from open pits as large as 100 feet in diameter and several feet deep. A portion of these aboriginal flint quarries is preserved at Flint Ridge State Memorial. Flint quarried from the area was used for scrapers, knives, drills, and arrow and spear points. This flint was also extensively traded by the Indian craftsmen. Because of its distinctive characteristics, Flint Ridge flint has been traced from the Atlantic seaboard to Kansas City, Missouri, and as far south as Louisiana. Interestingly, early settlers also found this flint to be a valuable resource and quarried it for use as grindstones for grist mills and as a source of sparks to fire their flintlock rifles. The only modern-day use of flint is in making colorful jewelry.

SALT

Another mineral resource exploited by the Indian population was salt. There were many sites in the state where natural brine seeps attracted buffalo and deer, which in turn attracted humans to their salty waters. One of the better known examples was in Jackson County at what is now the city of Jackson. Indians produced a low-grade salt in this vicinity by evaporating the weak brine solutions flowing from the springs or licks, as they were commonly known. The existence of these salt springs was known to settlers in Virginia as early as 1755. It is commonly believed that Europeans captured by Midwestern Indians during raids as far east as Virginia escaped and carried the word of the springs back to Virginia. The first European settlers visited the Jackson County site in 1794. This visit was very brief, however, as Indians were a very real threat. The party departed the day after arriving, just escaping an Indian war party which nearly caught them at the Ohio River.

As in the instance of flint, the settlers quickly began exploiting this resource. Salt was an especially important find to the early settlers, as their only other source was salt brought in over the mountains from the east by wagon or packhorse and which sold at $4.00 to $6.00 a bushel. This was a very high price for cash-poor settlers to pay for salt, which obviously became a luxury on the frontier. Because of its high price and high demand, early settlers quickly exploited existing springs and expanded their search for sources of salt, thus in effect creating the first mineral-resources extractive industry in Ohio.



Salt kettles at brining operation at Durant, Morgan County, 1903

The salt licks of Jackson had ceased to be an important salt source by 1818. From 1818 until 1889, salt was produced in Ohio primarily from the evaporation of natural brine reached by drilling. By the time of the Civil War, Ohio was a leading salt-producing state. Attempts were made to

establish salt plants in Columbiana, Guernsey, Hocking, Meigs, Morgan, and Tuscarawas Counties, with varying results. By far the most successful industry was established in Meigs County in the vicinity of Pomeroy. Salt was produced from natural brines from Mississippian- and Pennsylvanian-age sandstones in the Pomeroy area from before the Civil War until the 1970's.

Room-and-pillar salt mine beneath Lake Erie at Cleveland, Cuyahoga County. Photo courtesy of International Salt Co.

Rock salt was discovered in 1889 near Cleveland during the drilling of a well in search of natural gas. This discovery resulted in development of a large salt industry in northeastern Ohio, primarily in Cuyahoga, Lake, Medina, Summit, and Wayne Counties, based on the artificial brining of Silurian-age deposits of rock salt. In the early days of this segment of the industry, salt was produced for table and dairy use as well as for making ice cream and for glazing in the ceramic industry. Ultimately, there was a major buildup of industries in northeastern Ohio, particularly chemical and other industries which use salt as a raw material in the manufacture of industrial chemicals. In the late 1950's, work was begun on sinking shafts for salt mines in Cleveland and in Lake County. The salt produced from these mines is used almost exclusively for ice control.

In 1986 the two underground mines and three brining operations produced approximately 4 million tons of salt valued at almost $41 million—a far cry from days of the salt licks.

CLAY AND SHALE

Clay also was utilized by aboriginal Ohioans. Pottery fragments made from alluvial and glacial clays as well as from coal underclays are found at many archeological sites. Some of this ancient ware shows skills of workmanship suggesting that it does not represent the first stages of the art.

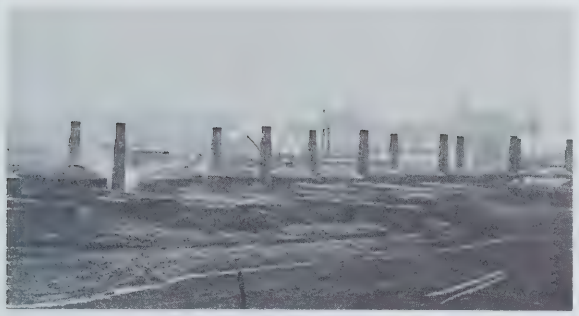
The first use of clay by European settlers appears to have been during the construction of Campus Martius in Marietta in 1788-1791. Brick was made at this site from alluvial clays. The brick industry expanded rapidly in Ohio with the influx of settlers in large numbers in the late 1700's and early 1800's. Most of the early brick works exploited alluvial and glacial clays. Underclays and shales were exploited as a burgeoning population required more and more products which could be made from these resources. One of the earliest uses of clay by European settlers was for pottery, which was being made in Cincinnati as early as 1799. Ohio was a leader in American china and art-pottery production.

Adena pipe, prehistoric Indian artifact made from Scioto-ville clay. Photo courtesy of Ohio Historical Society

Pieces from the Rookwood, Roseville, and Weller potteries are among the most collectible of American pottery. The Pottery Museum at East Liverpool and the Ohio Ceramic Center near Roseville display the variety of Ohio pottery.

Other uses for clay and shale which quickly followed were roofing tile, paving brick, terra cotta, decorative tile, sewer tile, fire brick, drain tile, sanitary ware, and numerous other products which can be made from clay and shale. Although many products formerly made from clay or shale are now made of substitute materials, Ohio continues to produce many valuable ceramic products. In 1986, production of these commodities totalled 2.4 million tons with a raw value of $8 million. To gain some appreciation of the

Pottery at East Liverpool, Columbiana County, 1800's. Photo courtesy of Ohio Historical Society



Athens Brick Plant, Athens County, *circa* 1910

value of the finished products, the interested reader is referred to the article "Clay and shale in the economy of Ohio" published in the 1985 *Report on Ohio mineral industries.*

Underground coal mine, location and date unknown

COAL

Coal has traditionally been considered Ohio's most valuable mineral resource and has been mined in Ohio since before the days of statehood. Both presently and historically coal has contributed substantially to Ohio's energy needs. It is not possible to pinpoint the exact date coal started to be used in the state. The earliest known reference to coal in Ohio is a map published by Lewis Evans in 1755. This map, entitled "A general map of the middle British colonies, in America," shows the word "coals" in the approximate area of what is now southern Stark and northern Tuscarawas Counties. The word "coals" is shown also along the Hockhocking [Hocking] River in the general vicinity of Athens County. It is known, however, that early settlers in the eastern portion of the state used coal that they found cropping out near their homes or settlements. It was not until 1800 that the first mined coal tonnage was reported. In that year production of 100 tons was recorded for Jefferson County. Three years later, when Ohio became a state, reported annual production was 200 tons from two counties. There was undoubtedly some unreported production; many farms in the coal-bearing region had small mines, commonly referred to as "dog holes," from which winter supplies of coal were obtained. Total tonnage from these individual farm mines was probably quite small relative to statewide figures. Commercial coal production was to grow from this small early start to an all-time peak of 55,136,699 tons in 1970. Cumulative production for the period from 1800 through 1985 totals slightly over 3 billion tons.

Underground coal-cutting machine; note carbide lamps on miners' caps

Coal is mined in Ohio by both strip and underground methods as well as by auger, which, as used in this state, is a combination of strip and underground methods. Underground mining was the principal method until about World War II, when strip mining began to increase at a very rapid rate. However, strip mining got a rather early start in Ohio in 1914, and in some counties, notably Jefferson, considerable coal was being produced by stripping as early as World War I.

The state reached an annual production high of 47,919,202 tons in the last year of World War I. This high was to stand until the all-time production record was set in 1970. Once strip mining began in earnest it grew to become the dominant method of mining in Ohio. During the past decade, strip mining rose to account for over 70 percent of total production. In 1986, stripping accounted for 59 percent of Ohio's total coal production.

It is not known when auger mining first started in Ohio. However, there is no tonnage attributed to this method

Blue Bell surface coal mine near Strasburg, Tuscarawas County, date unknown. Photo courtesy of Ohio Historical Society

prior to 1954, and, on the basis of discussions with officers of the Ohio Division of Reclamation, it seems that in all probability there was no auger mining until late 1953 or early 1954.

Although the Ohio coal industry has been in decline since 1970, coal is still of vital importance to the state's economy. In 1986 nearly 35 million tons were mined with a raw value exceeding $1 billion.

Casting iron pigs, Olive Furnace, Lawrence County, *circa* 1865-1877. Photo courtesy of Ohio Historical Society

IRON

The production of iron from native ores also was an early enterprise in the history of Ohio. Iron was not a commodity that was easily transported across the eastern mountains, and early settlers quickly turned to local sources. All the raw materials needed to produce iron—ore, limestone for flux, and forests for charcoal—were present in eastern and southern Ohio. The first blast furnace in Ohio, Hopewell Furnace, was built in 1804 near Poland, in Mahoning County. This furnace produced about 1 ton of raw iron per day; the iron was cast directly into pots, kettles, and other items. Although other furnaces were built in the intervening years, a major event was the construction of Union Furnace in 1826 in Lawrence County. Union was the first iron furnace built in the Ohio portion of what came to be known as the Hanging Rock Iron Region. Ultimately 46 charcoal blast furnaces were built in southern Ohio, propelling the state to a leadership role in the production of pig iron. By the time of the Civil War, Ohio was the leading producer of iron in the nation. Ohio has remained a major producer of iron and steel into the modern era, although native iron ore and coal were long ago replaced by richer raw materials brought in from out of state.

OIL AND GAS

The presence of oil in Ohio had been known to both its Indian and European residents from seeps which allowed small quantities of petroleum to accumulate on the surface of streams. Early settlers called it "Seneka Oil" and skimmed it off the surface of the water and used it for medicinal purposes. It is most likely that similar use was made even earlier by the American Indians.

A well drilled for brine in Noble County in 1814 encountered heavy flows of both oil and gas. However, it was not until 1860 that drilling specifically for oil was undertaken. In that year wells were drilled near Macksburg in Washington County and in Mecca Township, Trumbull County. From these early discoveries "oil fever" quickly spread through Ohio, establishing an industry that is still active today.

Drilling rig west of Chesterhill, Morgan County, 1890's

Commercial development of gas, albeit crude and limited, began in 1838 in Findlay in Hancock County. It was not until 1884 that serious efforts were made to develop gas in the Findlay region. In 1885 the Karg well was discovered; this well reportedly flowed at 12 million cubic feet per day. Findlay was famous for many years for its plentiful and cheap, or in some cases free, supplies of gas. The development of oil in northwestern Ohio took place simultaneously with gas. The Lima-Indiana field was the first "giant" field in the U.S., reaching a production peak of about 24 million barrels in 1896.

Oil derricks at Cygnet, Wood County, 1885; part of the Lima-Indiana field

Oil production fell steadily in Ohio from about 1900 through the early 1950's, when production began to rise. Production currently stands at approximately 13 million barrels annually. Gas production was erratic through the 1960's but has steadily risen since the 1970's and currently is in the range of 182 billion cubic feet per year.

Because of the worldwide drop in oil prices and locally lower gas prices, the total value of oil and gas fell during 1986. In 1986 the combined value of oil and gas was slightly over $720 million, obviously a major contribution to the state's mineral economy.

GYPSUM

Although not produced in huge quantities, gypsum is mined in Ohio and has supported a substantial industry in

Gypsum quarry, Ottawa County

Ottawa County. Production of gypsum has always been confined to the Sandusky Bay area, primarily on the north shore, although it has been mined in at least one locality on the south shore. Gypsum was reportedly discovered by boatmen on Sandusky Bay in the early 1800's when they pulled up pieces with their anchors. An investigation of the area led to the discovery of outcrops along the north shore, where quarrying was begun in 1822.

Early settlers used gypsum as a soil conditioner commonly known as "land plaster." Gypsum currently is used in the manufacture of plaster and plaster products such as wallboard. Gypsum also is used to retard the setting rate of portland cement. In 1986 only one mine continued to operate in Ottawa County and produced 214 thousand tons of raw gypsum valued at slightly over $2 million.

Limestone quarry at Tiffin, Seneca County, *circa* 1909

LIMESTONE AND DOLOMITE

Limestone and dolomite are valuable mineral commodities whose first use in Ohio is shrouded in obscurity. It seems likely that use of these resources, particularly limestone, began with the advent of European settlers, who brought a practice of mineral use to the new frontier. Lime for whitewashing and plastering was being advertised for sale as early as 1817 in Lebanon. W. W. Mather, the first State Geologist of Ohio, reported in 1838 that "Limestone is, undoubtedly, the most valuable building material among the rocks of Ohio." In addition to lime, early uses of limestone would have included foundations, hearth stones, window sills, and other architectural applications. As mentioned earlier, limestone was used extensively as flux stone in the manufacture of iron. The first use of flux stone would have been in 1804 with the building of Hopewell Furnace in Mahoning County. Limestone was used in the 1800's in the manufacture of hydraulic cement, a rather easily made cement which can use impure limestone. The use of limestone for agricultural purposes also became popular during this era.

Blasting at limestone quarry at Custar, Wood County, *circa* 1982 (photo by Robert W. Hites, Jr.)

From these early beginnings both limestone and dolomite expanded into major commodities which are produced for concrete and other aggregates, aglime, railroad ballast, road metal, dimension stone, chemical raw material, SO_2 sorbent stone, burnt lime and dolomite, and many other uses. Limestone came into extensive use for making portland cement, which is superior to hydraulic cement. Dolomite has come to occupy an important position in the manufacture of float glass, insulating glass fiber, and specialty glass. The combined value of both limestone and dolomite in 1986 was $148 million, with sales of over 40 million tons.

SANDSTONE

Sandstone is a mineral commodity which saw very early use by European settlers. The earliest uses were most probably for building stone, foundations, lintels, and other architectural purposes. Grindstones were being produced in Washington County as early as 1819. Ohio quickly developed into the major producer of sandstone in the nation. At first, native Ohio stone was shipped to cities down the Ohio River and later, as railroads were developed, to cities throughout the United States. Sandstone quarried at South Amherst in Lorain County has been used in buildings from Boston, Massachusetts, to Long Beach, California, and has been exported to Canada, Europe, and Australia. These northern Ohio sandstone quarries have the distinction of holding the record for both the world's deepest and perhaps the world's largest sandstone quarries. Ohio sandstone is

Sandstone quarry near McDermott, Scioto County, 1909

currently used for refractory linings, pool-table tops, laboratory "hot" tops, and other specialty applications, as well as architectural stone and aggregate.

Some sandstones as well as some conglomerates are of sufficient purity to be mined as a source of silica. Glass sand is known to have been mined in Ohio during the Civil War. High-purity-sand units continued to be developed, and by shortly after World War I a large array of high-silica products were being produced in the state. Current high-silica-sand units, either directly or through beneficiation, produce foundry, frac, and glass sand along with silica flour. High-purity conglomerates produce metallurgical pebble and refractory aggregate.

Sandstone quarry at South Amherst, Lorain County, 1952; quarry is over 200 feet deep (note workers in lower center of photo for scale)

As a commodity, sandstone has had small but remarkably constant production levels over the past 35 years. In 1986, sales of nearly 2 million tons with a value of over $24 million were reported in Ohio.

SAND AND GRAVEL

Sand and gravel were the last of Ohio's principal mineral resources to be commerically exploited. This commodity was not extensively developed until after the turn of the century. The growth of the sand and gravel industry is closely tied to economic development, as their principal use is for construction aggregate. The expansion of the state's highways and cities required huge volumes of low-cost aggregates for making concrete and bituminous concrete, to provide foundation subbases, for French drains, and for other construction uses. Because sand and gravel deposits are typically well drained, they are also heavily sought after as building sites, thus creating land-use conflicts in the demand not only for aggregates but for construction sites.

Sand pit, Gallia County, date unknown; this mine is still operating

Because sand and gravel are closely tied to construction, production fluctuates widely with the economy. In 1986, sand and gravel sales totalled almost 34 million tons with a value of $106 million.

SUMMARY

From this short discussion it is obvious that mineral production has always been important to the people occupying the geographic area we call Ohio. Minerals provide jobs for people, supply products for a better way of life, and contribute substantial dollars to the total state gross product.

As we at the Division of Geological Survey celebrate the Sesquicentennial of our founding, it is with pride that we can look back to a long history of service to old and honorable industries. In moving toward the Bicentennial of the Division it is important that we rededicate our efforts to provide objective, scientific information to aid the mineral industries and other segments of society as we continue to produce the mineral wealth of the state in a wise and environmentally sound way.

1986 OHIO MINING ACTIVITIES IN BRIEF

Reports were filed in 1986 for 410 coal-mining operations, of which 309 reported coal production. Reports also were filed for 51 separate coal-washing plants and associated facilities. Of 556 industrial-mineral-mining operations filing reports in 1986, 462 operations reported production. There were 15 mines reporting production of coal and one or more industrial minerals and 24 mines reporting production of multiple industrial minerals (including those mines producing coal and industrial minerals). There were 2,967 new wells drilled for oil and gas in 1986, of which 2,766 were productive and 201 were dry.

The total value[1] of coal was $1,100,976,112 in 1986; the value of oil and gas was $720,406,351; and the total value[1] of all industrial minerals was $329,570,673 in 1986.

[1]Includes reported and estimated values. Some operations reporting production did not report a value for that production. A statewide average price per ton was calculated for each commodity based on production for which the value was reported. This calculated average was used to estimate the value of production for which the actual value was not reported.

TABLE 1.—*1986 Mineral sales and production in Ohio*

Commodity	Production[1]	Sales[2]
Coal	34,733,410 tons	34,897,394 tons
Limestone and dolomite	40,856,057 tons	40,668,316 tons
Sand and gravel	35,177,132 tons	33,955,033 tons
Salt	4,343,397 tons	3,885,824 tons
Sandstone and conglomerate	1,876,296 tons	1,717,792 tons
Clay	1,085,585 tons	1,086,988 tons
Shale	1,274,178 tons	1,315,526 tons
Gypsum	213,972 tons	213,972 tons
Peat	11,162 tons	17,184 tons
Gas	182,072,348 MCF[3]	[4]
Oil	13,442,162 barrels	[4]

[1]The production figures for the industrial minerals are estimates. Many operators do not know acutal production. Some operators report estimates, other operators do not report any production. For those operators who do not report production, production is assumed to equal sales.
[2]Includes material for captive use.
[3]Thousand cubic feet.
[4]Figure not available.

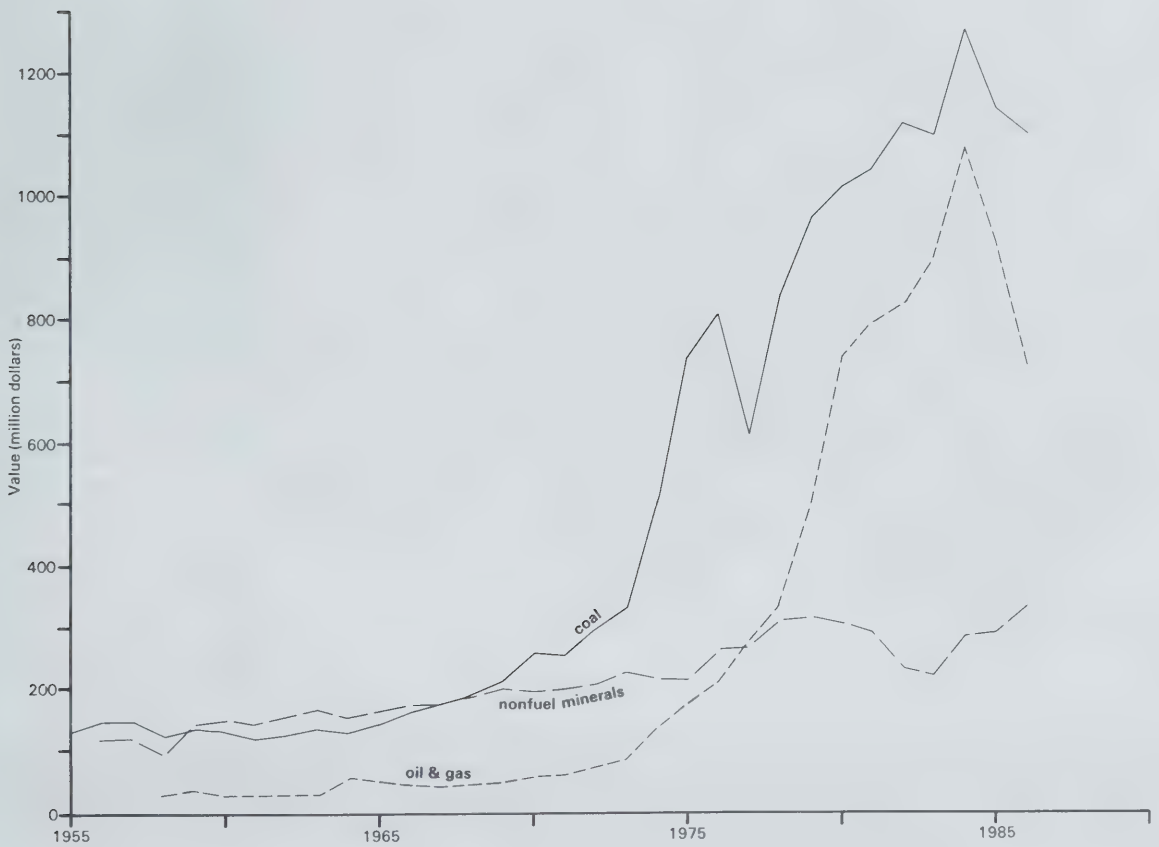


FIGURE 1.—Value of coal, nonfuel minerals, and oil and gas in Ohio.

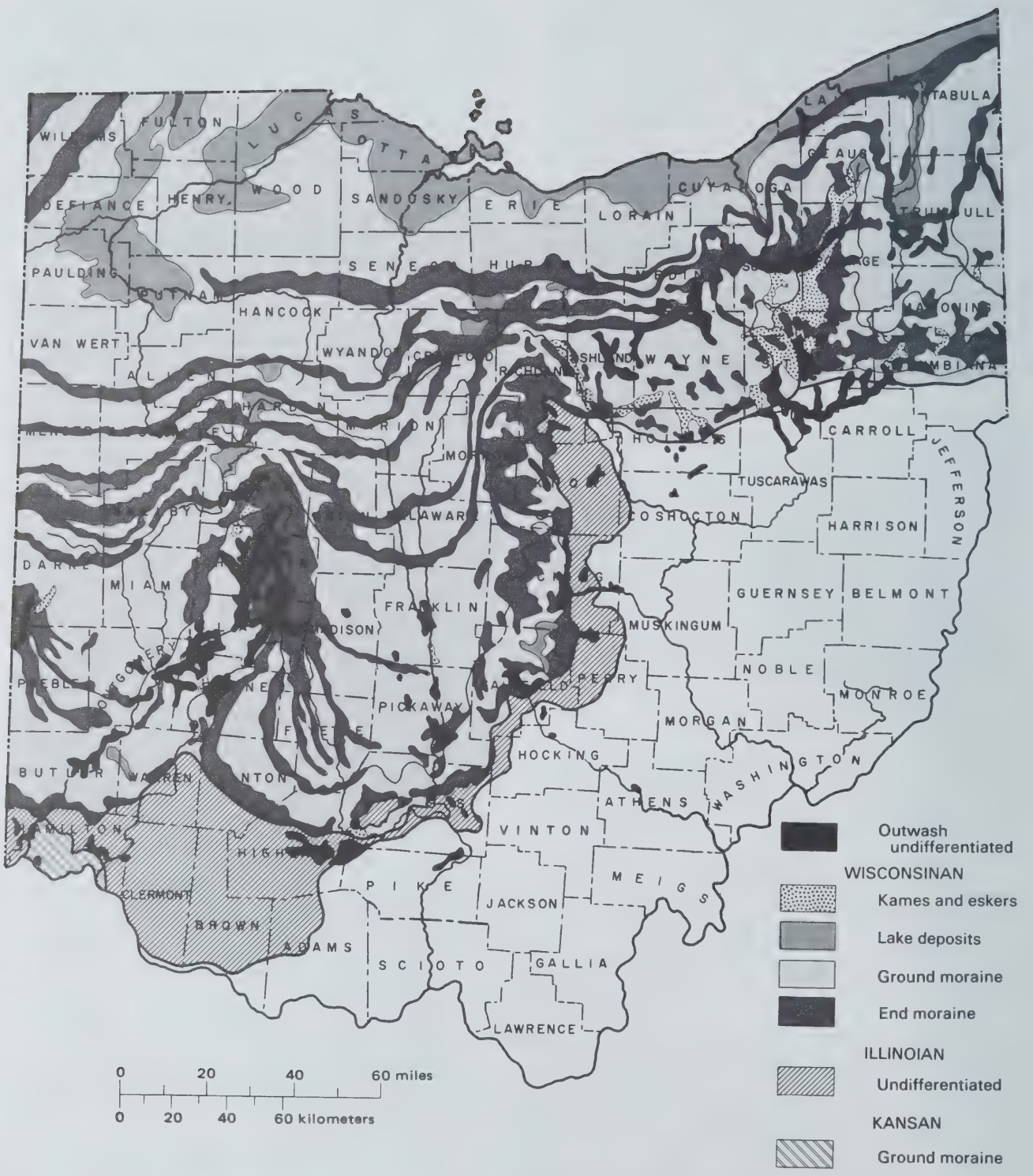


FIGURE 2.—Generalized map of the glacial deposits of Ohio. Continental glaciers advanced over the Ohio landscape several times during the Ice Age. These glaciers deposited unconsolidated materials on top of the bedrock over nearly two-thirds of the state. Most of Ohio's sand and gravel production comes from kames, eskers, and outwash, which were deposited by meltwater from the glaciers. Other glacially derived industrial minerals in Ohio include peat and clay.

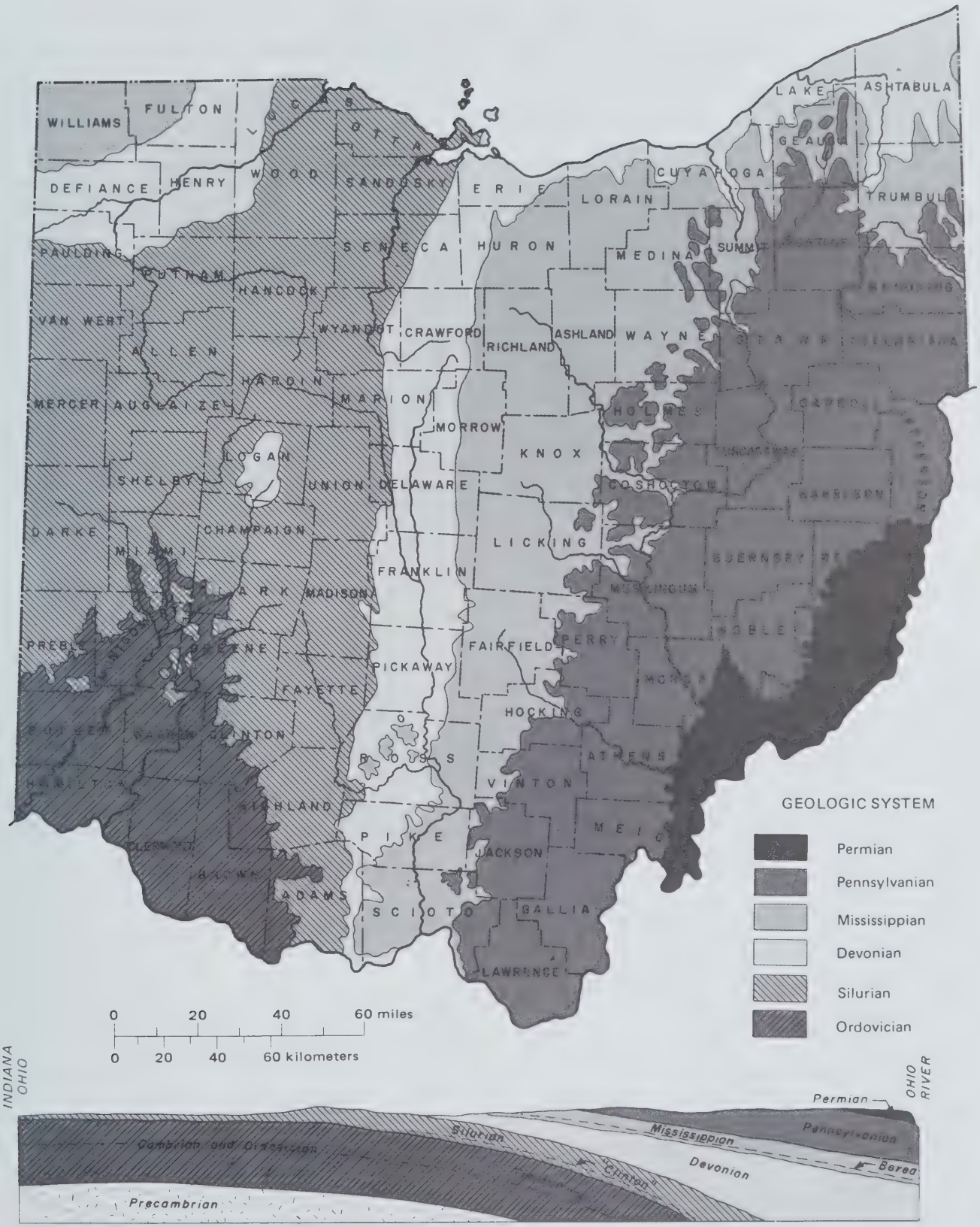


FIGURE 3.—Generalized geologic map and cross section of Ohio. Mineral production occurs throughout Ohio and from every geologic system from the Cambrian to the Permian. Coal, limestone and dolomite, sandstone and conglomerate, shale, clay, gypsum, salt, and oil and gas are produced from Ohio bedrock.

COAL

Coal was produced by 143 companies at 309 mines in 23 Ohio counties during 1986. Production decreased 2.1 percent from 1985, totalling 34,733,410 tons in 1986, with 20,477,267 tons produced at 294 surface mines, and 14,256,143 tons produced at 16 underground mines (one mine produced both surface and underground tonnage). In comparison to 1985, there were 25 more mines reporting production of 50,000 tons or less, 12 fewer mines producing between 50,000 and 500,000 tons, 4 fewer mines producing between 500,000 and 1,000,000 tons, and 1 more mine reporting production of 1,000,000 tons or greater; there was a net increase of 10 mines in 1986.

The five leading counties for 1986 production were Belmont, Meigs, Monroe, Harrison, and Noble Counties; these counties produced 53.7 percent of the 1986 total production. A total of 34,897,394 tons of coal were sold in 1986, with a total value[2] of $1,100,976,112. The average price per ton of all coal sold was $31.55; surface-mined coal averaged $28.18 per ton and underground-mined coal averaged $36.44.

In underground mining, 59.6 percent of the coal was mined by continuous miner and 40.4 percent was produced by longwall mining; no coal was produced by conventional mining in 1986. In surface operations, 3.5 percent of the coal produced was auger mined, and the remainder was strip mined.

The Pittsburgh (No. 8) coal was the most heavily mined seam, followed by the Middle Kittanning (No.6), Meigs Creek (No. 9), Clarion (No. 4A), and Lower Kittanning (No. 5) seams. Coal produced from these five seams made up 77.6 percent of the total 1986 production.

A total of 25,570,876 tons of coal were reported as washed in 1986. Reports from 36 coal-washing plants indicate an average 29.6 percent loss in washing.

Trucking was the primary means of coal disposition, carrying 39.3 percent of the total sales. Conveyor belts carried 26.4 percent, water transport carried 19.7 percent, and rail transported 14.6 percent of the coal sold in 1986; less than 0.1 percent was handled by other undesignated means. A total of 1.1 percent of the coal produced was reported as stored.

The total average annual employment reported was 8,587 employees, 5,354 of whom were production employees. The average annual wage earned by all production employees was $33,073, based on those employees for whom wages were reported. The average annual wage for surface-mine production employees was $32,102, and the average annual wage for underground-mine production employees was $34,041. Wages earned by all employees totalled $274,293,997 in 1986.

[2]Includes reported and estimated values. See footnote 1, p. 7.

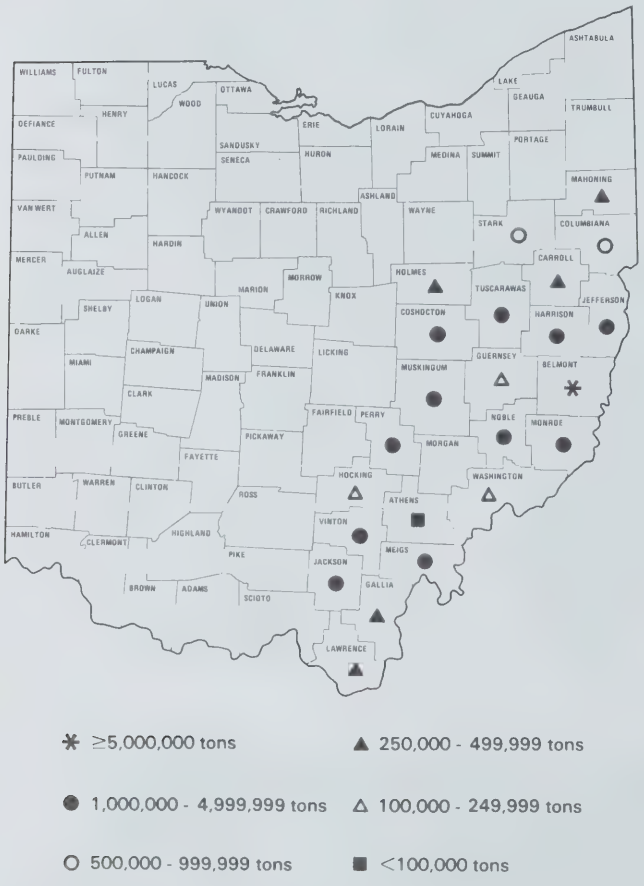


FIGURE 4.—Coal sales in Ohio in 1986, by county.

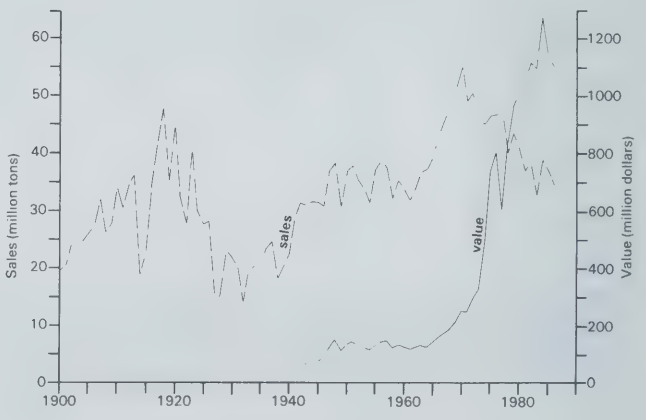


FIGURE 5.—Sales and value of coal in Ohio.

TABLE 2.—*1986 Ohio coal production by production-size group and change from 1985*

Production-size group	1986		Change from 1985 (short tons)
	Number of mines reporting	Production (short tons)	
Under 25,000 tons	136	1,413,562	+31,348
25,000 to 49,999 tons	66	2,415,621	+545,669
50,000 to 99,999 tons	43	2,890,160	-1,336,203
100,000 to 249,999 tons	43	6,681,434	+570,549
250,000 to 499,999 tons	9	3,178,634	+571,836
500,000 to 999,999 tons	5	3,749,349	-2,613,343
1,000,000 tons and over	7	14,404,650	+1,498,180
TOTAL	309	34,733,410	-731,964

TABLE 3.—*1986 Ohio coal production by county and mining method*

County[1]	All methods (short tons)	Underground					Surface			
		Number of mines reporting	Production (short tons)				Number of mines reporting	Production (short tons)		
			Total	Longwall	Conventional	Continuous miner		Total	Strip	Auger
Athens	31,489						2	31,489	31,489	
Belmont	5,190,242	2[2]	1,784,031	22,746		1,761,285	56[2]	3,406,211	3,241,081	165,130
Carroll	280,852						12	280,852	270,217	10,635
Columbiana	707,485	2	7,097			7,097	33	700,388	671,020	29,368
Coshocton	1,573,503						13	1,573,503	1,549,370	24,133
Gallia	446,041	2	65,044			65,044	3	380,997	380,997	
Guernsey	222,446						5	222,446	185,369	37,077
Harrison	3,374,168	3	2,098,897	1,064,295		1,034,602	18	1,275,271	1,234,855	40,416
Hocking	149,363						6	149,363	149,363	
Holmes	471,396						7	471,396	471,396	
Jackson	1,330,420	1	132,079			132,079	12	1,198,341	1,198,341	
Jefferson	1,985,742						24	1,985,742	1,951,490	34,252
Lawrence	370,953						2[2]	370,953	370,953	
Mahoning	323,278						7	323,278	305,105	18,173
Meigs	3,777,492	2	3,777,492	1,845,467		1,932,025				
Monroe	3,571,638	1	3,571,638	2,833,887		737,751				
Muskingum	1,822,078						5	1,822,078	1,741,603	80,475
Noble	2,747,938						7	2,747,938	2,642,130	105,808
Perry	2,201,464	2	1,749,822			1,749,822	10	451,642	451,642	
Stark	540,662						14	540,662	529,605	11,057
Tuscarawas	1,648,980						44[2]	1,648,980	1,484,791	164,189
Vinton	1,784,578	1	1,070,043			1,070,043	12	714,535	714,535	
Washington	181,202						2	181,202	181,202	
TOTAL	34,733,410	16[3]	14,256,143	5,766,395	0	8,489,748	294[3]	20,477,267	19,756,554	720,713

[1]Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.
[2]Does not include mines extending into this county from adjoining counties.
[3]Production was reported from a total of 309 mines. One mine produced both surface and underground tonnage.

TABLE 4.—*1986 Ohio coal production by county and month*

County[1]	Production (short tons)												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
Athens	31,489	4,989	3,989	2,807	3,546	4,306	3,037	2,896	1,229	2,494	1,336	705	155
Belmont	5,190,242	519,900	447,399	486,468	480,437	370,123	390,189	353,735	455,174	426,766	451,781	390,725	417,545
Carroll	280,852	19,562	25,239	23,229	32,191	24,720	26,042	23,736	26,084	22,815	28,965	18,455	9,814
Columbiana	707,485	57,035	54,216	54,950	55,252	51,434	56,455	55,882	47,661	36,101	89,641	75,678	73,180
Coshocton	1,573,503	149,195	130,176	128,287	146,083	136,306	120,535	101,439	121,162	147,746	146,357	114,060	132,157
Gallia	446,041	40,485	28,317	32,290	36,325	37,881	34,621	29,456	32,441	35,161	51,986	43,217	43,861
Guernsey	222,446	19,980	17,739	16,899	20,168	17,889	13,125	19,091	16,382	22,031	20,393	18,467	20,282
Harrison	3,374,168	358,403	323,633	241,218	245,960	297,967	303,412	243,016	309,879	294,241	294,084	214,483	247,872
Hocking	149,363	20,069	22,598	20,653	8,743	7,604	5,110	12,266	15,737	14,792	10,936	5,201	5,654
Holmes	471,396	55,234	47,219	46,355	42,635	37,118	33,971	39,496	38,958	26,358	38,865	31,532	33,655
Jackson	1,330,420	118,468	101,208	120,436	115,802	102,613	114,069	73,763	103,062	99,418	123,137	110,079	148,365
Jefferson	1,985,742	196,573	160,546	156,544	147,282	154,772	169,925	162,515	163,854	183,606	184,844	149,542	155,739
Lawrence	370,953	36,425	27,687	36,203	34,183	27,760	32,087	29,494	34,879	37,405	27,460	20,183	27,187
Mahoning	323,278	30,662	21,737	27,329	28,649	26,577	23,467	35,373	23,847	19,088	23,987	30,329	32,233
Meigs	3,777,492	436,721	337,899	360,761	373,926	305,777	281,086	150,339	242,465	260,685	388,231	307,027	332,575
Monroe	3,571,638	403,183	352,386	353,000	258,221	340,239	298,890	182,981	328,166	279,159	228,677	214,653	332,083
Muskingum	1,822,078	159,111	122,147	148,914	160,294	82,128	82,596	51,734	92,524	81,705	320,863	288,457	231,605
Noble	2,747,938	246,513	223,873	262,781	254,584	319,987	349,926	232,627	323,741	334,369	68,810	26,872	103,855
Perry	2,201,464	221,471	182,511	190,500	189,789	174,237	159,032	121,740	191,876	197,090	214,550	189,671	168,997
Stark	540,662	44,044	30,177	40,289	41,920	33,112	39,663	44,886	51,456	42,584	40,146	58,307	74,078
Tuscarawas	1,648,980	187,273	136,096	147,731	146,423	141,954	137,324	129,268	132,553	130,946	137,584	100,591	121,237
Vinton	1,784,578	189,770	154,867	184,893	152,044	140,225	142,764	116,320	150,616	143,069	147,499	122,249	140,262
Washington	181,202	17,733	12,413	14,188	12,111	10,740	11,367	9,806	11,431	12,976	14,917		53,520
TOTAL	34,733,410	3,532,799	2,964,072	3,096,725	2,986,568	2,845,469	2,828,693	2,221,859	2,915,177	2,850,605	3,055,049	2,530,483	2,905,911

[1]Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 5.—*1986 Ohio coal production*

County[1]	Production											
	Total	Sharon (No. 1)	Quaker-town (No. 2)	Lower Mercer (No. 3)	Upper Mercer (No. 3A)	Tionesta (No. 3B)	Brookville (No. 4)	Winters	Clarion (No. 4A)	Lower Kittanning (No. 5)	Strasburg (No. 5A)	Middle Kittanning (No. 6)
Athens	31,489											
Belmont	5,190,242											
Carroll	280,852									5,906		135,739
Columbiana	707,485						67,839			4,518		272,828
Coshocton	1,573,503									777,852		795,651
Gallia	446,041											149,284
Guernsey	222,446									5,530		103,605
Harrison	3,374,168											
Hocking	149,363											28,535
Holmes	471,396			25,662			68,637			210,103		166,994
Jackson	1,330,420	216,221		22,001			232,471		481,777	348,055		21,251
Jefferson	1,985,742											
Lawrence	370,953								49,869	76,339		
Mahoning	323,278						269,273			47,130		6,875
Meigs	3,777,492								3,777,492			
Monroe	3,571,638											
Muskingum	1,822,078											723,515
Noble	2,747,938											
Perry	2,201,464		103							76,654		2,098,568
Stark	540,662						128,403			188,362	5,163	212,962
Tuscarawas	1,648,980				60,266	87,375	84,971			400,473	39,963	737,755
Vinton	1,784,578			36,985			157,422	47,906	1,120,891	341,394		64,820
Washington	181,202											
TOTAL	34,733,410	216,221	103	84,648	60,266	87,375	1,009,016	47,906	5,430,029	2,482,316	45,126	5,518,382

[1]Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

Sterling Coal Mine, Columbiana County, *circa* 1910

by county and seam

(short tons)

Lower Freeport (No. 6A)	Upper Freeport (No. 7)	Mahoning (No. 7A)	Wilgus	Harlem	Pittsburgh (No. 8)	Pomeroy-Redstone (No. 8A)	Meigs Creek (No. 9)	Uniontown (No. 10)	Waynesburg (No. 11)	Washington (No. 12)
	21,441				10,048					
					2,218,187		1,417,343	741	1,206,249	347,722
10,161	12,236			78,798	24,597		13,415			
50,361	285,043	26,896								
32,522						264,235				
	113,311									
1,723,570	328,765			216,135	655,457	168,780	116,377		165,084	
120,828										
8,644										
1	20,164				1,471,725	264,724	28,342		143,929	56,857
			47,328			197,417				
					3,571,638					
	14,984				100,717		982,862			
							2,747,938			
	26,139									
4,770	1,002									
67,237	170,940									
6,764	8,396									
							181,202			
2,024,858	1,002,421	26,896	47,328	294,933	8,052,369	895,156	5,487,479	741	1,515,262	404,579

TABLE 6.—*1986 Disposition of Ohio coal, by county*

County[1]	Number of mines	Disposition[1] (short tons)						Stored
		Total[2]	Rail	Water	Truck	Conveyor	Unspecified/ other	
Athens	2	31,489			31,489			
Belmont	58[3]	5,210,899	2,208,668	1,673,871	1,328,356		4	144,574
Carroll	12	280,681			280,681			171
Columbiana	34	711,026			711,026			
Coshocton	13	1,606,557			899,549	707,008		1,942
Gallia	5	441,901			441,901			
Guernsey	5	222,613		28,530	194,083			382
Harrison	21	3,286,346	197,451	839,681	940,395	1,308,819		71,177
Hocking	6	149,363		99,077	50,286			
Holmes	7	473,876			473,876			
Jackson	13	1,330,420		10,734	1,319,686			
Jefferson	24	1,978,214		385,698	1,592,516			15,403
Lawrence	2[3]	378,487		110,098	263,146		5,243	6,880
Mahoning	7	296,479			296,479			17,551
Meigs	2	3,806,227				3,806,227		3,542
Monroe	1	3,562,458		3,562,458				6,078
Muskingum	5	1,855,629	79,695	5,363	787,709	982,845	17	
Noble	7	2,746,798		40,343	312,369	2,394,070	16	165
Perry	11	2,160,063	1,537,739		622,324			104,990
Stark	14	539,197		37,478	501,719			3,665
Tuscarawas	43[3]	1,867,183	3,207	79,587	1,784,389			4,284
Vinton	13	1,780,286	1,065,751	22,151	692,384			
Washington	2	181,202			181,202			
TOTAL	307	34,897,394	5,092,511	6,895,069	13,705,565	9,198,969	5,280	380,804

[1]Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and type(s) of disposition reported unless a by-county breakdown was provided by the operator.
[2]Does not reflect tonnage stored. Reflects tonnage sold and shipped from mine.
[3]Does not include mines extending into this county from adjoining counties.

Coal tipple, Belmont County

TABLE 7.—*1986 Rail shipments of Ohio coal, by county of origin and carrier*

County[1]	Number of mines	Shipments[1] (short tons)				
		Total	Conrail	B & O	N & W	C & O
Belmont	11	2,208,668	1,481,061	271,562	456,045	
Harrison	1	197,451	197,451			
Muskingum	2	79,695	79,695			
Perry	1	1,537,739	1,537,739			
Tuscarawas	2	3,207	3,207			
Vinton	1	1,065,751				1,065,751
TOTAL	18	5,092,511	3,299,153	271,562	456,045	1,065,751

[1]Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and the carriers reported unless a by-county breakdown was provided by the operator.

TABLE 8.—*1986 Washed Ohio coal*

		Raw coal (short tons)	Washed coal (short tons)	Loss in washing (short tons)	Loss in washing (percent)	Percent of all washed coals
By type of mining	From surface mines	14,030,335[1]	11,627,722	2,402,613	17.1	45.5
	From underground mines	22,295,737[1]	13,943,154	8,352,583	37.5	54.5
	TOTAL	36,326,072	25,570,876[2]	10,755,196	29.6	100.0
By seam	Lower Mercer (No. 3)	8,094	7,691	403	5.0	<0.1
	Upper Mercer (No. 3A)	43,208	38,014	5,194	12.0	0.2
	Brookville (No. 4)	106,667	81,134	25,533	23.9	0.3
	Winters	41,413	28,056	13,357	32.3	0.1
	Clarion (No. 4A)	8,804,060[1]	5,366,212	3,437,848	39.1	21.0
	Lower Kittanning (No. 5)	600,765	460,885	139,880	23.3	1.8
	Middle Kittanning (No. 6)	3,053,373	2,031,294	1,022,079	33.5	7.9
	Lower Freeport (No. 6A)	2,719,904	1,633,545	1,086,359	39.9	6.4
	Upper Freeport (No. 7)	177,665	143,069	34,596	19.5	0.6
	Pittsburgh (No. 8)	9,633,429[1]	6,434,457	3,198,972	33.2	25.2
	Pomeroy-Redstone (No. 8A)	862,149	672,534	189,615	22.0	2.6
	Meigs Creek (No. 9)	4,831,268	4,098,447	732,821	15.2	16.0
	Uniontown (No. 10)	345,108	281,720	63,388	18.4	1.1
	Waynesburg (No. 11)	1,409,552[1]	1,189,525	220,027	15.6	4.7
	Washington (No. 12)	118,512[1]	106,708	11,804	10.0	0.4
	Other[3]	3,570,905[1]	2,997,585	573,320	16.1	11.7
	TOTAL	36,326,072	25,570,876[2]	10,755,196	29.6	100.0

[1]The raw tonnage (before washing) of coal was estimated for those mines which failed to report this information. These estimates were calculated using a statewide-average loss-in-washing percentage based on raw/washed coal values for type of mining and for seam deemed to be reliable.
[2]These figures reflect total washed coal in 1986 and do not necessarily reflect only 1986 production. In 1986, 31.9% of the total production was reported as unwashed. Coal not designated as washed or unwashed was assumed to be unwashed.
[3]Other = unspecified tonnages of seams listed above.

TABLE 9.—*1986 Dollar value of coal at mine by county and mining method*

County[1]	Surface				Underground				Total			
	No. of mines	Tonnage sold (short tons)	Value at mine[2] (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine[2] (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine[2] (dollars)	Per ton average (dollars)
Athens	2	31,489	$631,880	$20.07					2	31,489	$631,880	$20.07
Belmont	56[3]	3,387,804	96,662,543	28.53	2[3]	1,823,095	$57,432,838	$31.50	58[3]	5,210,899	154,095,381	29.57
Carroll	12	280,681	7,360,093	26.22					12	280,681	7,360,093	26.22
Columbiana	33	703,929	13,910,295	19.76	2	7,097	125,343	17.66	34[4]	711,026	14,035,638	19.74
Coshocton	13	1,606,557	56,619,806	35.24					13	1,606,557	56,619,806	35.24
Gallia	3	376,857	9,479,584	25.15	2	65,044	1,198,093	18.42	5	441,901	10,677,677	24.16
Guernsey	5	222,613	6,780,970	30.46					5	222,613	6,780,970	30.46
Harrison	18	1,202,952	42,953,105	35.71	3	2,083,394	67,256,818	32.28	21	3,286,346	110,209,923	33.54
Hocking	6	149,363	2,894,977	19.38					6	149,363	2,894,977	19.38
Holmes	7	473,876	8,779,611	18.53					7	473,876	8,779,611	18.53
Jackson	12	1,198,341	27,163,303	22.67	1	132,079	1,783,226	13.50	13	1,330,420	28,946,529	21.76
Jefferson	24	1,978,214	52,158,687	26.37					24	1,978,214	52,158,687	26.37
Lawrence	2[3]	378,487	8,622,495	22.78					2[3]	378,487	8,622,495	22.78
Mahoning	7	296,479	5,413,098	18.26					7	296,479	5,413,098	18.26
Meigs					2	3,806,227	167,019,873	43.88	2	3,806,227	167,019,873	43.88
Monroe					1	3,562,458	129,694,330	36.41	1	3,562,458	129,694,330	36.41
Muskingum	5	1,855,629	56,044,023	30.20					5	1,855,629	56,044,023	30.20
Noble	7	2,746,798	97,529,603	35.51					7	2,746,798	97,529,603	35.51
Perry	9	451,486	9,808,251	21.72	2	1,708,577	47,638,800	27.88	11	2,160,063	57,447,051	26.60
Stark	14	539,197	8,306,985	15.41					14	539,197	8,306,985	15.41
Tuscarawas	43[3]	1,867,183	48,204,962	25.82					43[3]	1,867,183	48,204,962	25.82
Vinton	12	714,535	19,339,474	27.07	1	1,065,751	47,185,898	44.27	13	1,780,286	66,525,372	37.37
Washington	2	181,202	2,977,148	16.43					2	181,202	2,977,148	16.43
TOTAL	292	20,643,672	$581,640,893	$28.18	16	14,253,722	$519,335,219	$36.44	307[4]	34,897,394	$1,100,976,112	$31.55

[1]Sales reported from mines operating in more than one county were evenly split between the counties involved unless a by-county breakdown was provided by the operator.
[2]The FOB value of coal sold was estimated for those mines which failed to report this information. These estimates were calculated using a statewide-average price per ton by mining method based on reported FOB values deemed to be reliable.
[3]Does not include mines extending into this county from adjoining counties.
[4]One mine sold both surface and underground tonnage.

TABLE 10.—*1986 Ohio coal-mine employment[1], by occupational group and month*

Occupational group	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
All production workers	5,354	5,596	5,453	5,402	5,353	5,254	5,238	5,304	5,317	5,331	5,367	5,352	5,277
Underground mines													
Tonnage employees	619	662	637	599	623	624	618	588	603	613	618	633	613
Underground production employees	1,978	2,061	2,001	1,960	2,006	2,009	1,953	1,954	1,968	1,981	1,939	1,965	1,945
Surface production employees	74	86	83	82	68	68	67	69	68	73	73	77	73
Surface mines													
Strip miners	2,654	2,761	2,706	2,735	2,631	2,526	2,564	2,666	2,637	2,635	2,712	2,653	2,618
Auger miners	29	26	26	26	28	27	36	27	41	29	25	24	28
Reclamation	155	132	136	135	161	186	185	170	161	173	160	141	122
Supervisory, technical, and clerical	1,779	1,888	1,863	1,857	1,860	1,912	1,921	1,685	1,679	1,664	1,678	1,671	1,671
Central preparation plant, central shop, etc.	1,299	1,403	1,318	1,358	1,344	1,330	1,322	1,142	1,218	1,274	1,316	1,333	1,233
TOTAL	8,587	9,019	8,770	8,752	8,721	8,682	8,666	8,301	8,375	8,442	8,521	8,497	8,303

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.

TABLE 11.—*1986 Ohio coal-mine production employment[1], by county and month*

County[2]	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Athens	6	7	6	6	7	6	6	6	6	5	5	5	5
Belmont	786	837	846	811	745	702	704	766	800	781	793	855	798
Carroll	62	59	59	61	65	65	64	61	60	58	73	70	47
Columbiana	131	134	138	129	156	132	129	119	109	109	140	139	134
Coshocton	254	265	254	252	232	230	226	248	260	281	270	261	267
Gallia	84	88	85	86	90	81	90	77	76	87	79	77	92
Guernsey	30	33	28	32	23	25	25	41	30	35	30	31	31
Harrison	552	510	512	479	529	539	544	620	610	594	576	552	556
Hocking	6	10	8	6	4	6	6	7	7	7	4	4	4
Holmes	24	23	23	23	23	24	24	22	24	25	24	24	24
Jackson	107	100	90	92	108	102	115	95	104	119	123	112	120
Jefferson	272	283	271	265	265	261	281	264	277	285	303	252	263
Lawrence	76	76	76	76	74	62	77	76	76	78	77	79	80
Mahoning	50	45	47	47	42	44	52	60	59	54	54	51	51
Meigs	688	713	715	708	710	708	674	676	674	672	669	670	670
Monroe	624	744	655	650	644	645	614	608	605	603	566	601	558
Muskingum	280	299	296	303	314	295	292	280	257	261	260	258	243
Noble	256	257	253	261	264	259	255	243	242	248	254	266	264
Perry	442	456	449	451	438	442	443	437	435	425	432	444	449
Stark	72	68	66	66	70	73	75	66	70	74	72	85	84
Tuscarawas	226	240	231	237	230	230	226	222	217	219	246	196	217
Vinton	315	340	336	352	311	314	309	300	309	298	300	306	306
Washington	11	9	9	9	9	9	7	10	10	13	17	14	14
TOTAL	5,354	5,596	5,453	5,402	5,353	5,254	5,238	5,304	5,317	5,331	5,367	5,352	5,277

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 12.—*1986 Ohio coal-mine employment[1] in central preparation plants, central shops, etc., by county and month*

County[2]	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Athens	[3]	1	0	0	0	0	0	0	0	0	0	0	0
Belmont	174	185	180	192	193	191	189	186	169	169	175	174	87
Columbiana	16	9	9	9	10	10	10	9	9	10	38	37	34
Coshocton	47	54	51	49	48	47	47	45	44	45	43	43	43
Gallia	13	13	12	12	13	13	13	12	12	12	13	13	13
Harrison	81	80	80	65	85	83	83	82	82	84	83	82	84
Hocking	2	4	4	4	2	2	2	1	2	1	1	1	1
Jackson	18	10	10	10	22	21	23	21	20	18	20	22	22
Jefferson	43	66	5	50	45	38	45	49	45	44	43	43	41
Lawrence	23	29	24	28	22	24	21	16	16	17	23	33	27
Mahoning	13	14	14	14	13	12	12	13	12	13	14	14	14
Meigs	217	225	225	224	217	217	215	215	215	214	212	212	212
Monroe	64	81	71	71	72	72	68	68	6	67	61	65	61
Muskingum	169	190	191	187	184	183	181	19	178	175	181	181	179
Noble	179	192	191	189	179	178	176	175	175	173	173	174	174
Perry	62	59	59	60	59	60	59	59	59	59	72	72	72
Scioto	16	0	0	0	21	21	21	21	21	21	21	21	21
Stark	17	15	16	18	19	20	19	15	16	19	14	14	14
Tuscarawas	49	67	66	67	50	46	48	44	42	36	41	43	42
Vinton	93	99	100	99	86	88	86	92	95	97	88	89	92
Washington	3	10	10	10	4	4	4	0	0	0	0	0	0
TOTAL	1,299	1,403	1,318	1,358	1,344	1,330	1,322	1,142	1,218	1,274	1,316	1,333	1,233

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.
[3]Averages fewer than one employee per month.

TABLE 13.—*1986 Ohio coal-mine employment[1] in supervisory, technical, and clerical positions, by county and month*

County[2]	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Athens	2	1	1	1	4	4	4	1	1	2	2	1	1
Belmont	244	296	291	292	315	288	286	187	190	184	197	207	194
Carroll	10	10	10	10	10	10	10	10	10	10	10	10	10
Columbiana	15	15	12	12	13	13	14	11	11	11	22	22	22
Coshocton	91	96	94	92	104	101	104	82	83	88	82	84	83
Gallia	35	36	37	35	33	33	33	35	34	34	35	35	35
Guernsey	6	1	1	1	8	11	12	6	5	5	5	6	6
Harrison	193	181	181	185	237	251	259	177	173	170	171	160	167
Hocking	1	0	0	0	1	1	1	0	0	0	3	3	3
Holmes	3	2	2	2	5	4	4	2	2	2	3	3	3
Jackson	18	13	13	13	20	21	21	23	20	20	20	18	19
Jefferson	65	64	61	59	68	69	73	63	65	70	68	59	62
Lawrence	23	22	22	22	22	22	22	24	23	24	24	27	26
Mahoning	9	7	7	7	8	8	8	11	11	11	11	11	11
Meigs	290	301	298	294	292	293	290	293	288	283	285	285	285
Monroe	237	255	252	247	245	240	241	235	233	231	226	223	223
Muskingum	120	126	124	124	127	123	124	118	118	116	114	115	116
Noble	91	104	101	103	32	101	99	91	92	92	91	94	95
Perry	106	108	108	106	108	106	107	103	103	102	106	106	105
Scioto	2	0	0	0	2	2	2	2	2	2	2	2	2
Stark	25	23	23	22	20	20	20	29	31	31	28	28	28
Tuscarawas	67	79	76	79	69	74	71	64	65	57	57	57	57
Vinton	122	140	141	143	114	114	113	116	117	117	114	114	117
Washington	4	8	8	8	3	3	3	2	2	2	2	1	1
TOTAL	1,779	1,888	1,863	1,857	1,860	1,912	1,921	1,685	1,679	1,664	1,678	1,671	1,671

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 14.—*1986 Ohio surface coal-mine reclamation employment[1], by county and month*

County[2]	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Athens	3	3	2	2	3	3	4	3	3	2	2	2	2
Belmont	19	24	21	19	20	26	23	24	16	17	13	15	12
Columbiana	7	3	3	3	6	8	5	9	8	7	12	12	11
Coshocton	7	2	2	1	6	13	6	3	1	13	15	13	5
Guernsey	2	1	1	0	1	3	2	2	3	2	3	3	0
Harrison	2	1	1	2	3	3	3	4	4	4	0	0	0
Jackson	1	0	0	0	1	1	1	3	3	3	1	1	0
Jefferson	7	4	7	5	4	4	8	9	9	9	7	8	13
Mahoning	1	1	1	1	0	0	0	2	2	3	0	0	0
Muskingum	41	37	37	36	45	45	44	44	44	44	44	37	37
Noble	45	41	42	44	52	53	54	47	48	48	44	36	36
Stark	4	2	2	2	4	6	10	4	2	3	5	2	0
Tuscarawas	13	4	8	10	13	18	22	16	18	18	14	12	6
Vinton	1	5	6	6	0	0	0	0	0	0	0	0	0
Washington	2	4	3	4	3	3	3	0	0	0	0	0	0
TOTAL	155	132	136	135	161	186	185	170	161	173	160	141	122

[1]Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.
[2]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 15.—*1986 Wage and salary payments to Ohio coal-mine employees, by county and occupational group*

County[1]	Wage and salary payments (nearest whole dollar)[2]								
	All occupations	Tonnage employees	Underground production employees	Surface production employees	Strip miners	Auger miners	Central preparation plant, central shop, etc.	Supervisory, technical, and clerical	Reclamation
Athens	$96,675				$84,221		$130	$7,228	$5,096
Belmont	38,542,999	4,530,997	5,693,688	861,185	12,988,723	40,164	5,504,244	8,429,396	494,602
Carroll	1,534,204				1,384,952			149,252	
Columbiana	3,945,704				3,128,741		402,940	312,785	101,238
Coshocton	12,334,955				7,805,535	19,636	1,164,720	3,252,324	92,740
Gallia	3,695,342	118,211	107,328		2,222,790		420,232	826,781	
Guernsey	1,049,227				869,258			161,492	18,477
Harrison	30,166,662	4,862,698	8,795,790	753,263	4,751,271		2,673,011	8,269,949	60,680
Hocking	205,913				164,271		28,082	13,560	
Holmes	704,096				625,883			78,213	
Jackson	4,330,967		401,397	36,269	2,547,216	5,503	601,219	721,783	17,580
Jefferson	11,803,683				7,831,365	52,027	1,376,320	2,286,194	257,777
Lawrence	3,464,593				2,220,622		585,714	658,257	
Mahoning	1,853,911				1,259,640		309,692	241,199	43,380
Meigs	44,180,758		23,892,369				7,598,914	12,689,475	
Monroe	22,622,248	7,060,201	14,423,154	1,138,893					
Muskingum	19,359,886				8,956,259		5,128,992	4,309,205	965,430
Noble	26,653,911				16,748,890	238,141	5,065,109	3,502,876	1,098,895
Perry	18,153,886	4,047,205	5,733,594		2,284,812		1,739,864	4,342,861	5,550
Stark	2,457,939				1,468,067		374,839	563,963	51,070
Tuscarawas	8,514,408				5,309,533	194,733	1,223,076	1,635,346	151,720
Vinton	18,017,298		8,466,288		1,774,264		2,875,779	4,875,190	25,777
Washington	603,284				414,167		65,029	77,951	46,137
Wayne	1,448						1,448		
TOTAL	$274,293,997	$20,619,312	$67,513,608	$2,789,610	$84,840,480	$550,204	$37,139,354	$57,405,280	$3,436,149

[1]For those operations reporting activity in more than one county, wage and salary payments were evenly split between the counties involved unless a by-county breakdown was provided by the operator.
[2]For those operations reporting only a total wage and salary payment to all workers, an equal pay rate was assumed for all employees. In cases where quarterly employment was reported but wage and salary payments were not, wage and salary payments for that quarter were estimated from reported payments in the other quarters to arrive at the annual figure.

INDUSTRIAL MINERALS

Industrial minerals, other than mineral fuels, were produced in a total of 84 Ohio counties in 1986. The combined value of all nonfuel industrial minerals sold in 1986 was $329,570,673.

The average annual employment reported in 1986 for industrial mineral operations was 2,617 production employees and 1,045 nonproduction employees. There were 313 companies producing industrial minerals from 462 operations. Fifteen of these companies produced more than one mineral commodity from 19 operations.

The multiple-commodity operations employed 129 production people and 15 nonproduction people. Ten operations produced clay and shale and employed 38 production people and 6 nonproduction people; 2 operations produced limestone and shale and employed 52 production people and 2 nonproduction people; 4 operations produced limestone and clay and employed 31 production people and 3 nonproduction people; 1 operation produced limestone and sand and gravel and employed no production people and averaged less than one nonproduction person per month; 2 operations produced limestone, sandstone, shale, and clay and employed 8 production people and 4 nonproduction people. The 129 multiple-commodity production employees worked an average of 224 days in 1986. Total wages reported in 1986 for 129 production employees and 15 nonproduction employees at multiple-commodity operations were $3,210,535. The average annual wage was $22,295.

The total reported wages for all employees at industrial mineral operations in 1986 were $82,846,311. The average annual wage, based on those employees for whom wages were reported, was $23,834.

TABLE 16.—*1986 Value of Ohio industrial minerals*

Commodity	Sales (tons)	Change from 1985 (tons)	Value[1]	Percent of total value
Limestone and dolomite	40,668,316	+3,655,292	$148,207,832	45.0
Sand and gravel	33,955,033	+6,656,728	106,097,061	32.2
Salt	3,885,824	-453,747	40,890,030	12.4
Sandstone and conglomerate	1,717,792	-355,992	24,544,585	7.5
Shale	1,315,526	-992	1,739,025	0.5
Clay	1,086,988	+118,441	5,957,860	1.8
Gypsum	213,972	-33,991	2,032,736	0.6
Peat	17,184	-12,400	101,544	<0.1
TOTAL	82,860,635	+9,573,339	$329,570,673	100.0

[1]The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a statewide-average price per ton based on reported FOB values.

Sand and gravel pit, Hamilton County

TABLE 17.—*1986 Employment at Ohio industrial mineral operations, by county and commodity*

County[1]	Number of employees[2]																			
	Total		Limestone and dolomite		Sand and gravel		Sandstone and conglomerate		Clay		Shale		Salt		Gypsum		Peat		Multiple commodities	
	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production
Athens	19	27	19	27																
Allen	42	7	38	5	4	2														
Ashland	8	2			8	2														
Ashtabula	10	4			10	4														
Athens	7	16	4	4	3	12														
Auglaize	21	5	16	2	5	3			[3]											
Belmont	21	10	16	3	5	7														
Brown	2		2																	
Butler	62	26			62	26														
Carroll	18	4	16	2	2	1		1												
Champaign	15	2			15	2														
Clark	30	10	2	1	28	9														
Clermont	7	5			7	5														
Clinton	8	4	8	4																
Columbiana	2										2									
Coshocton	32	18			8	17	23				1	1								
Crawford	41		41																	
Cuyahoga	68	189			[3]		2	[3]			3		63	189						
Darke	7	3	5	1	2	2														
Defiance	1				1															
Delaware	59	7	59	7																
Erie	77	22	66	20	3		8	2												
Fayette	19	3	19	3																
Fairfield	3	1			3	1														
Franklin	124	31	43	2	81	29														
Gallia	1				1															
Geauga	57	22			6	2	51	20												
Greene	28	5	9	1	16	4			3											
Hamilton	40	67			40	67														
Hancock	28	2	28	2																
Hardin	3	13	3	13																
Harrison	1										1									
Henry	5				5															
Highland	16	17	16	17																
Hocking	5	8			2	8													3	
Holmes	36	6	18	1	6	3			1	1	[3]	[3]							11	1
Huron	4	1			3	1	1													
Jackson	6								1										5	
Knox	62	24			28	23	34	1												[3]
Lake	135	1			1	1							134							

Lawrence	12	2			4	2			2	[3]	6									
Licking	28	12			26	11					1		1	1						
Logan	24	20	19	15	3	5											2			
Lorain	19	11			[3]		19	11												
Lucas	54	12	49	7	5	5														
Mahoning	45	7	5	5			1												39	2
Marion	32	8	26	5	4	2					2	1								
Medina	31	2			28	2													3	
Meigs	9	30			9	30														
Mercer	26	2	26	2																
Miami	69	35	52	16	17	19														
Monroe	6	1	6	1																
Montgomery	47	15	8	2	39	13														
Morgan	10	4			10	4														
Morrow	6	1			6	1														
Muskingum	76	11	47	8	16	3			2										11	
Noble	15	2	14	2							1									
Ottawa	112	30	97	27											15	3				
Paulding	33	6	18	4															15	2
Perry	67	3	7				58	3	2											
Pickaway	14	8	1	1	13	7														
Pike	10	13	4	6	6	7														
Portage	68	44			68	44														
Preble	16	10	8	2	8	8														
Putnam	5	2	5	2																
Richland	21	3			21	3														
Ross	33	7			10	3	23	4												
Sandusky	85	34	85	34																
Scioto	9	3			4	2	5	1												
Seneca	69	8	69	8																
Shelby	18	21	12	15	6	6														
Stark	56	14	7		33	9			10	3									6	2
Summit	11	4			10	4							1							
Trumbull	2	2					2	2												
Tuscarawas	91	18	8	1	26	6	6		13	3	2								36	8
Union	16	7	16	7																
Van Wert	18	6	18	6																
Vinton	4		4																	
Warren	19	14			19	14														
Washington	11	13	2	1	9	12														
Wayne	34	9			24	4							10	5						
Williams	3	8			3	8														
Wood	23	11	23	11																
Wyandot	123	7	111	2	10	4			1								1	1		
Maumee River	5				5															
Lake Erie	2	3			2	3														
TOTAL	2,617	1,045	1,175	305	799	472	233	45	35	7	19	2	209	195	15	3	3	1	129	15

[1]For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.
[2]Reflects employment as reported. Employment is not included for mines which were owner operated.
[3]Averages fewer than one employee per month.

LIMESTONE AND DOLOMITE

Limestone and dolomite were sold or produced by 78 companies at 115 operations in 54 Ohio counties during 1986. Sales of limestone and dolomite totalled 40,668,316 tons, with Erie, Sandusky, Ottawa, Wyandot, and Delaware Counties accounting for 35.1 percent of those sales. Reported known production totalled 40,856,057 tons.

Lime produced from Ohio limestone and dolomite totalled 1,405,371 tons in 1986, and came from five operations in Ottawa, Sandusky, and Wyandot Counties.

The total value[3] of limestone and dolomite sold in 1986 was $148,207,832, with an average price per ton of $3.64.

An annual average of 1,175 employees worked an average of 187 days to produce limestone and dolomite. Total wages reported in 1986 for 1,173 production employees and 304 nonproduction employees were $35,395,286. The average annual wage, based on those employees for whom wages were reported, was $23,964. An additional 91 employees mined limestone and dolomite along with one or more other mineral commodities.

Primary uses for crushed and broken limestone and dolomite were building, stone for portland cement concrete, and stone for bituminous concrete. Other major uses for various forms of the stone included riprap, the manufacture of portland cement, aglime (a noncalcined product), and metallurgical stone.

[3]See footnote 1, p. 7.

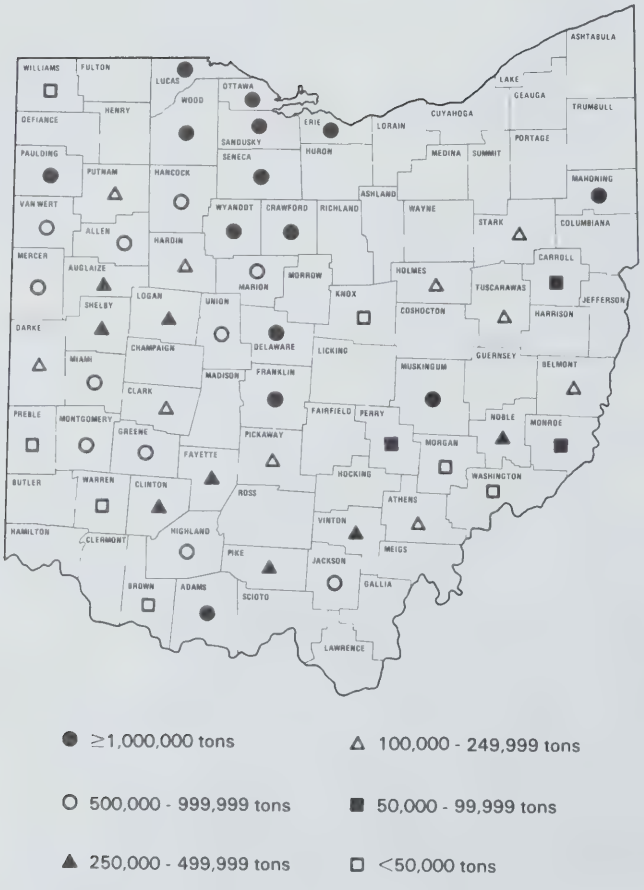


FIGURE 6.—Sales of limestone and dolomite in Ohio in 1986, by county.

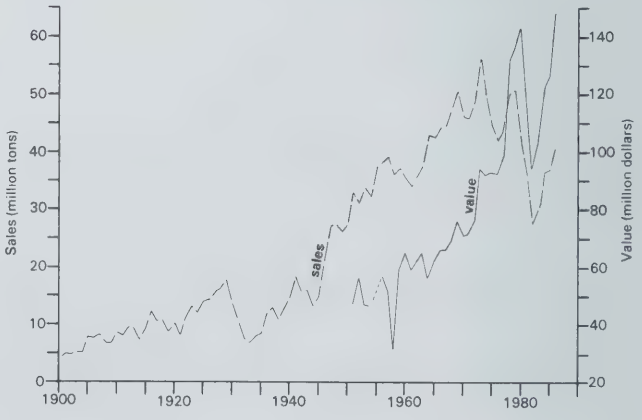


FIGURE 7.—Sales and value of limestone and dolomite in Ohio. Value line dashed where data not available.

TABLE 18.—*1986 Ohio limestone and dolomite sales, by county and type*

County	Tons sold														
	Total, all types	Crushed and broken stone									Dimension stone	For portland cement manufacture	Agricultural stone (aglime)	Raw stone for burning	Unspecified/ other
		Total	Riprap	Metallurgical stone	Stone for portland cement concrete	Stone for bituminous concrete	Building, road base, resurfacing	Railroad ballast	Refractory stone	Unspecified/ other					
Adams	1,477,579	1,423,203	7,692	110,419	71,109	16,184	932,892	164,443		120,464			43,935		10,441
Allen	992,930	976,124	25,162		11,302	47,876	796,100	68,078		27,606			7,846		8,960
Athens	146,409	146,409					146,409								
Auglaize	465,405	460,737	79,111				381,386	240					4,668		
Belmont	195,822	195,822	19,211				176,611								
Brown	7,328	7,328					7,328								
Carroll	77,103	77,103					77,103								
Clark	106,208	106,208					106,208								
Clinton	391,833	376,993	37,763		25,563	63,734	246,863		3,070				14,840		
Crawford	1,055,157	1,003,117	2,877	332,830			585,624	32		81,754			52,040		
Darke	168,034	168,034					168,034								
Delaware	2,454,865	2,421,329	22,994	285			2,397,902	148					33,536		
Erie	3,313,593	3,042,585	67,200		663,000	479,946	1,740,130	92,309					89,427		181,581
Fayette	271,227	255,887			4,411		251,476					386	14,954		
Franklin	2,442,741	2,442,741					2,442,741								
Greene	853,770	193,631					193,631					660,139			
Hancock	637,052	622,361	3,366		21,150		373,382	224,463							14,691
Hardin	104,318	94,202	470				93,732						7,532		2,584
Highland	775,409	736,085	5,946	17,109	12,919	66,408	633,703						39,324		
Holmes	227,835	227,835					227,835								
Jackson	734,989	734,989					734,989								
Knox	2,290														2,290
Logan	482,894	304,416	16,247		102,007	21,561	164,601								178,478
Lucas	1,968,319	1,877,467	42,667		233,042	139,241	1,453,001			9,516		40,215	50,637		
Mahoning	1,686,734	1,470,921	742,261	20,928	246,155	121,086	339,862	629				176,185	39,166		462
Marion	568,343	554,206	4,593		21,057	43,151	461,994	17,114		6,297			14,137		
Mercer	538,152	527,209	62,661				464,548						10,943		
Miami	827,562	774,898	9,644	90,843	47,203	39,754	403,382	51,071		133,001	3,906		48,758		
Monroe	50,119	40,119	10,000							30,119					10,000
Montgomery	651,218	465,581					465,581					185,637			
Morgan	21,183	21,183					21,183								
Muskingum	1,140,605	1,058,019	32,102		182,557	47,727	765,030	20,603		10,000		44,603	37,983		
Noble	333,788	333,788				41,274	292,514								
Ottawa	2,864,234	2,669,040	327,930	103,597	755,630	173,700	1,308,033			150			54,724	140,470	
Paulding	1,205,543	870,545	22,883		368,317	60,310	408,194			10,841		300,656	34,342		
Perry	86,482	86,482					86,482								
Pickaway	102,849	102,682	570		22,196		79,916						167		
Pike	281,154	252,342	17,018		8,001	53,830	173,493						28,812		
Preble	33,573	30,362	2,249				28,113				3,211				
Putnam	178,916	178,916	458				178,458								
Sandusky	2,953,937	368,762	157,898	67,201	4,333	870	63,724			74,736			157,480	2,427,695	
Seneca	1,815,205	1,615,117	8,757				1,606,360				17,168		182,920		
Shelby	385,815	385,236	49,108			100,684	131,259	104,185					579		
Stark	130,864	130,864	899				129,965								
Tuscarawas	107,767	107,767	3,018				40,604		64,145						
Union	816,874	787,326	2,664		51,983	4,300	728,379						29,548		
Van Wert	544,768	465,631	56,493		109,565	75,175	93,183	374		130,841			16,723		62,414
Vinton	259,248	228,720					228,720						30,528		
Warren	1,193	1,193					1,193								
Washington	300	300	300												
Williams[1]	3,960	2,610			1,141	75	1,394				1,350				
Wood	1,031,016	990,479	58,150		139,554	185,891	581,910	8,840		16,134			40,537		
Wyandot	2,693,804	2,320,994	2,678	432,933	280,452	124,764	1,011,547	166,792	90,852	210,976			160,453	212,357	
TOTAL	40,668,316	34,735,898	1,903,040	1,176,145	3,382,647	1,907,541	24,426,702	919,321	158,067	862,435	25,635	1,407,821	1,246,539	2,780,522	471,901

[1]Sales only of limestone in Williams County. No limestone mined there.

TABLE 19.—*1986 Production of lime from Ohio stone, by county and type*

County	Total tons	Building (tons)	Chemical and industrial (tons)	Refractory (tons)	Other (tons)
Ottawa	70,235	60,208	10,027		
Sandusky	1,222,801		859,549	29,580	333,672
Wyandot	112,335		112,335		
TOTAL	1,405,371[1]	60,208	981,911	29,580	333,672

[1]Burning produced a 49.5 percent weight loss.

Dolomite quarry, Allen County, 1962

SAND AND GRAVEL

Sand and gravel were sold or produced by 207 companies at 257 operations in 61 Ohio counties during 1986. Sales[4] of sand and gravel totalled 33,955,033 tons, of which sand comprised 16,519,263 tons and gravel comprised 17,435,770 tons. Hamilton, Franklin, Portage, Butler, and Montgomery Counties led in sales, accounting for 45.0 percent of the total. Reported known production[4] of sand and gravel totalled 35,177,132 tons in 1986.

A total of 190,467 tons of sand and 1,026 tons of gravel were dredged from Lake Erie, and 78,312 tons of sand and 85,824 tons of gravel were dredged from the Maumee River. Total sand and gravel production from Lake Erie and the Maumee River was 355,629 tons in 1986.

The total value[5] of sand and gravel sold in 1986 was $106,097,061, with an average price per ton of $3.12.

An annual average of 799 employees worked an average of 151 days in 1986 to produce sand and gravel. Total wages of $26,909,602 were reported for 777 production employees and 460 nonproduction employees. The average annual wage, based on those employees for whom wages were reported, was $21,754.

Road construction and resurfacing, building, portland cement concrete, and bituminous concrete were the major uses for Ohio sand and gravel in 1986.

[4]Please note—Sales and production figures for sand and gravel include material dredged from Lake Erie and the Maumee River.

[5]Includes reported and estimated values. See footnote 1, p. 7.

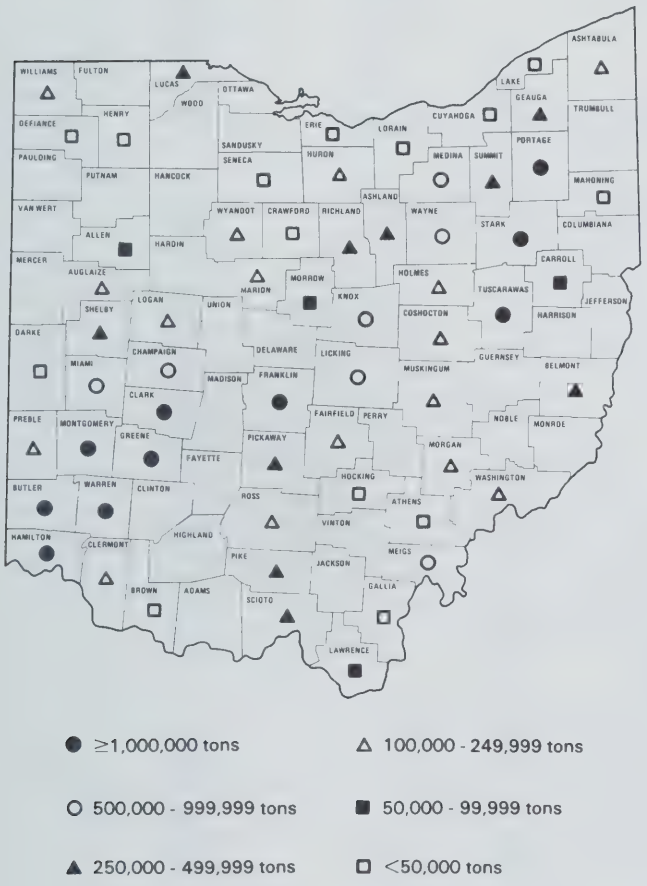


FIGURE 8.—Sales of sand and gravel in Ohio in 1986, by county.

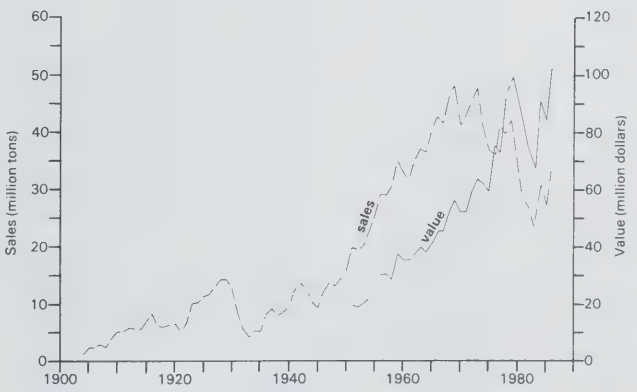


FIGURE 9.—Sales and value of sand and gravel in Ohio. Value line dashed where data not available. 1984, 1985, and 1986 figures include Lake Erie and Maumee River dredged material.

TABLE 20.—*1986 Ohio sand sales, by county and type*

County	Tons sold							
	Total	Foundry	Portland cement concrete	Bituminous concrete	Building	Road construction, resurfacing	Filtration	Other/ unspecified
Allen	36,112		19,954		440	10,066	5,652	
Ashland	100,060	36	2,269		21,594	69,983		6,178
Ashtabula	91,842			550	28,000	1,100		62,192
Athens	27,153			8,680		6,704		11,769
Auglaize	108,099		95,305		3,280			9,514
Belmont	206,395		65,227	139,335				1,833
Brown	2,953					2,953		
Butler	1,091,248		95,853	43,493	134,750	798,178		18,974
Carroll	29,562					29,562		
Champaign	176,238				8,762	95,761		71,715
Clark	432,528		144,356	104,572	12,434	166,011		5,155
Clermont	56,907			33,900				23,007
Coshocton	81,617					67,808		13,809
Crawford	1,237							1,237
Cuyahoga	15,187							15,187
Darke	22,412							22,412
Erie	32,887	2,243						30,644
Fairfield	139,000		94,000	41,000	2,500			1,500
Franklin	1,265,606		12,910	167,780	308,672	776,244		
Gallia	1,484	1,484						
Geauga	288,085		173,552	31,414	83,119			
Greene	436,818		36,443	15,805	15,304	159,094		210,172
Hamilton	2,273,126		151,475	188,932	103,957	1,434,185		394,577
Henry	17,867					17,867		
Hocking	28,541		6,800		3,200	8,000	2,500	8,041
Holmes	46,607		9,729		2,215	14,793		19,870
Huron	73,578		3,216		64,066	1,398	3,649	1,249
Knox	269,994		31,036	58,672	31,104	45,560		103,622
Lake	8,830		1,100	2,100	125	5,380	125	
Lawrence	59,686						17,207	42,479
Licking	473,671	13,289		11,712	164,060	220,448		64,162
Logan	106,391		44,009		9,828	1,871		50,683
Lorain	2,616							2,616
Lucas	404,193				402,781	1,412		
Mahoning	8,081				8,081			
Marion	85,443				85,038		405	
Medina	689,666			55,880	162,326	409,313		62,147
Meigs	304,383			250,742	27,789	25,852		
Miami	330,170				498	39,546		290,126
Montgomery	509,827		119,636	93,719	73,731	193,305		29,436
Morgan	68,710		18,873	14,453	14,453	18,875	2,056	
Morrow	24,867				24,737	130		
Muskingum	140,786		13,730	101,879	11,403		381	13,393
Pickaway	172,488							172,488
Pike	330,306		263,643	63,871	2,737			55
Portage	2,057,765		398,196	193,743	409,073	361,247	359	695,147
Preble	53,123		10,624	5,312	21,251	15,936		
Richland	82,732		50		29,563	50,319		2,800
Ross	80,993		5,371	30,007	20,708			24,907
Scioto	266,332		197,349	54,895	10,000	1,200		2,888
Seneca	2,750							2,750
Shelby	137,621		45,000	30,000	29,725			32,896
Stark	532,696		65,145	134,840	200,263	54,255		78,193
Summit	208,338	1,505			109,445	50,313		47,075
Tuscarawas	491,792		52,024	129,626	134,740	169,314		6,088
Warren	574,797				116,849	209,870		248,078
Washington	91,387		11,432	15,057	35,096	24,576	5,226	
Wayne	310,475		48,085	15,833	4,000			242,557
Williams	103,808		86,476	350	16,429		553	
Wyandot	182,618		104,237	18,523	33,341	18,886	3,654	3,977
Lake Erie	190,467		158,087	27,730		4,650		
Maumee River	78,312		78,312					
TOTAL	16,519,263	18,557	2,663,504	2,084,405	2,981,467	5,581,965	41,767	3,147,598

TABLE 21.—*1986 Ohio gravel sales, by county and type*

County	Tons sold						
	Total	Building	Portland cement concrete	Bituminous concrete	Road construction, resurfacing	Filtration	Other/ unspecified
Allen	20,485	3,459	1,164		1,459	8,219	6,184
Ashland	150,898	46,651			76,814		27,433
Ashtabula	68,859			764	721	1,605	65,769
Athens	16,701			8,680	5,121		2,900
Auglaize	71,017		66,606				4,411
Belmont	244,376		88,434	37,113	24,734		94,095
Brown	2,952				2,952		
Butler	1,705,035	561,560	27,789		1,075,377	26,983	13,326
Carroll	33,875				33,875		
Champaign	473,097	48,436			137,803		286,858
Clark	793,960	175,461	159,830	127,063	245,194		86,412
Clermont	69,574			23,245			46,329
Coshocton	109,079				91,776		17,303
Crawford	1,238						1,238
Darke	25,274						25,274
Defiance	15,400				15,400		
Erie	13,700	3,200					10,500
Fairfield	103,000	22,167	3,167	43,333	34,333		
Franklin	2,072,017	476,967	39,397	135,570	1,420,083		
Geauga	77,290	27,409			19,575	28,977	1,329
Greene	607,563	15,452	51,674	27,359	237,322	3,856	271,900
Hamilton	2,199,544	373,488	9,899	105,667	1,446,674		263,816
Hocking	12,323	1,000	2,900		4,275	1,000	3,148
Holmes	72,838	13,500	6,500		16,662	15,184	20,992
Huron	32,410	32,410					
Knox	477,719	42,285	30,616	58,875	70,376		275,567
Lake	16,170	833		2,982	8,077	4,069	209
Licking	491,043	50,399		7,544	343,134		89,966
Logan	71,336						71,336
Mahoning	2,693	2,693					
Marion	26,411	8,299					18,112
Medina	241,936	56,240			185,565		131
Meigs	211,264	55,400		105,985	49,679		200
Miami	550,727	2,758			56,939		491,030
Montgomery	1,023,199	278,667	142,114	104,837	269,673	6,747	221,161
Morgan	151,190	38,807	38,808	29,966	38,811	4,798	
Morrow	63,730	23,903			32,309	5,787	1,731
Muskingum	77,964	85	16,301	30,053	16,769		14,756
Pickaway	176,185						176,185
Pike	61,914	1,550	2,951	1,427	49,669	653	5,664
Portage	1,096,845	330,578	96,071	117,833	335,509	1,311	215,543
Preble	131,313	39,396	26,263	13,132	52,522		
Richland	363,169	253,645	2,090	24,485	52,744	130	30,075
Ross	56,247	12,830		21,970	18,274	2,969	204
Scioto	53,313	1,364			51,949		
Seneca	687						687
Shelby	190,141	29,725	45,480	30,000			84,936
Stark	761,946	62,134	79,485	234,264	161,107		224,956
Summit	116,360	50,568			51,164		14,628
Tuscarawas	511,626	137,018	32,196	97,308	240,621		4,483
Warren	881,532	146,305			394,611		340,616
Washington	131,108	33,673	22,537	17,347	50,173	5,906	1,472
Wayne	249,478	102,530	18,901	20,857			107,190
Williams	132,996	31,955	27,835	20,088	20,088		33,030
Wyandot	36,173	11,561	24	116	2,400	8,078	13,994
Lake Erie	1,026						1,026
Maumee River	85,824						85,824
TOTAL	17,435,770	3,606,361	1,039,032	1,447,863	7,442,313	126,272	3,773,929

TABLE 22.—*1986 Ohio Lake Erie and Maumee River sand and gravel production*

Area	Production[1]	
	Cubic yards	Short tons
Lake Erie		
Fairport (sand)	62,372	84,202
Maumee Bay	[2]	
Vermilion-Lorain Inner (sand)	78,715	106,265
Vermilion-Lorain Outer (gravel)	760	1,026
Maumee River		
Sand	58,009	78,312
Gravel	63,573	85,824
TOTAL	263,429	355,629

[1]Production reported in cubic yards; converted to tons in the ratio of 1 cubic yard equals 1.35 short tons.
[2]No production reported for 1986.

Sand and gravel dredge on Lake Erie

SANDSTONE AND CONGLOMERATE

Sandstone and conglomerate were produced by 15 companies at 25 operations in 14 Ohio counties during 1986. Sales totalled 1,717,792 tons, with Geauga, Perry, Knox, Tuscarawas, and Ross Counties accounting for 83.5 percent of that total. Crushed sandstone and conglomerate accounted for 1,646,978 tons, and dimension stone accounted for 70,814 tons of the total sales. Reported known production of sandstone and conglomerate was 1,876,296 tons in 1986.

The total value[6] of sandstone and conglomerate sold in 1986 was $24,544,585, with an average price per ton of $15.05 for crushed stone and $36.46 for dimension stone. The overall average price per ton was $14.29.

An annual average of 233 employees worked an average of 154 days in 1986 to produce sandstone and conglomerate. Total wages earned in 1986 by 233 production employees and 45 nonproduction employees were $5,792,896. The average annual wage in 1986 was $20,838. An additional 8 employees mined sandstone and conglomerate along with one or more other mineral commodities.

Crushed stone was used primarily for glass sand, foundry sand, silica flour, and aggregate. Dimension stone was used primarily for rough construction, rough architectural purposes, and finished stone.

[6]Includes reported and estimated values. See footnote 1, p. 7.

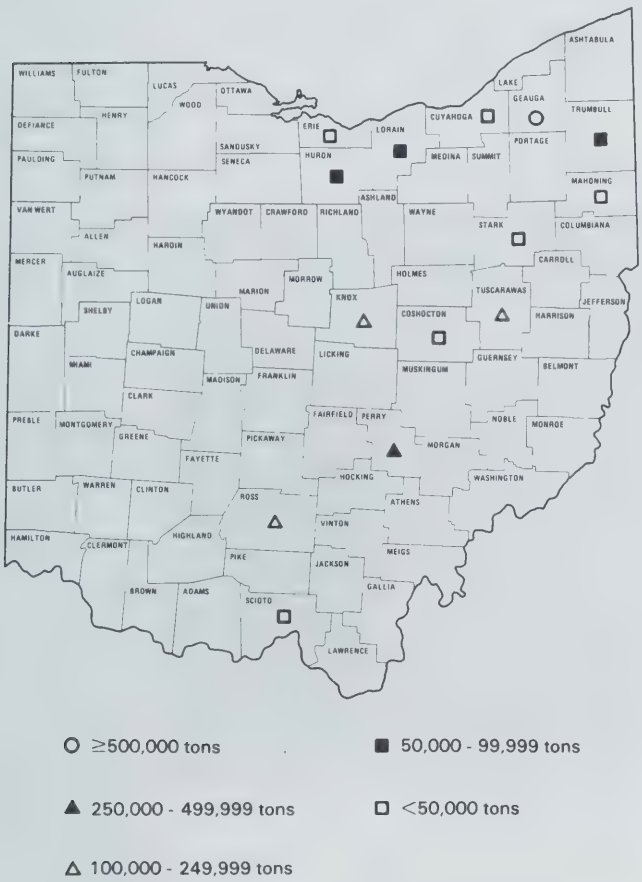


FIGURE 10.—Sales of sandstone and conglomerate in Ohio in 1986, by county.

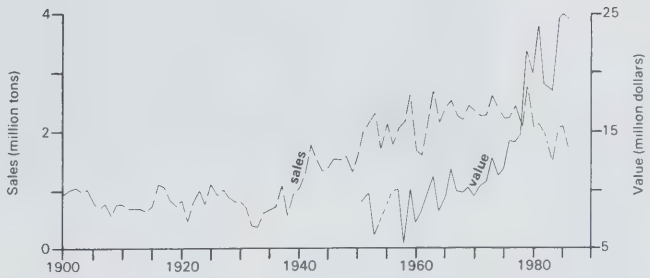
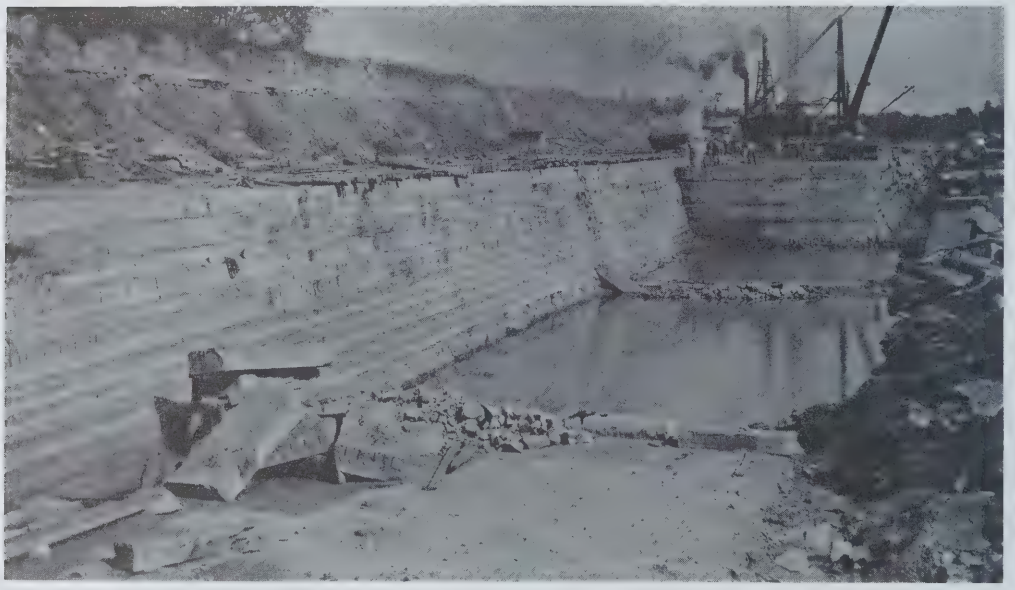


FIGURE 11.—Sales and value of sandstone and conglomerate in Ohio. Value line dashed where data not available.

TABLE 23.—*1986 Ohio sales of crushed sandstone and conglomerate, by county and type*

County	Tons sold												
	Total	Foundry sand	Glass sand	Metallurgical pebble	Refractory	Riprap	Aggregate	Silica flour	Polishing/ grinding sand	Fire and furnace sand	Engine sand	Frac sand	Other
Cuyahoga	7,500					7,500							
Geauga	633,601	195,161	86,672	51,936	12,226	2,002	41,038	1,115	7,935	28,027	9,900	34,362	163,227
Huron	57,121					57,121							
Knox	165,510	23,882	76,602					53,165			4,844	5,485	1,532
Lorain	63,048						63,048						
Mahoning	42,124												42,124
Perry	282,585	50,834	122,178					88,092					21,481
Ross	157,793	28,890	75,882								29,466		23,555
Stark	12,680					12,680							
Trumbull	59,421						59,421						
Tuscarawas	165,595	393								30,479			134,723
TOTAL	1,646,978	299,160	361,334	51,936	12,226	79,303	163,507	142,372	7,935	58,506	44,210	39,847	386,642



Sandstone quarry near McDermott, Scioto County

TABLE 24.—*1986 Ohio sales of dimension sandstone and conglomerate, by county and type*

County	Tons sold									
	Total	Refractory	Rough construction	Rubble	Grindstone	Rough architectural	Finished	Curbing	Flagging	Other
Coshocton	15,555	1,343				14,212				
Erie	3,174			1,234	2	261	1,501	93	83	
Geauga	20,346		7,916		318	1,183			301	10,628
Knox	1,846					1,846				
Lorain	9,008		1,915	1,656	11		4,945	250	231	
Ross	7,095		434							6,661
Scioto	13,790		13,790							
TOTAL	70,814	1,343	24,055	2,890	331	17,502	6,446	343	615	17,289

CLAY

Clay was produced by 24 companies at 33 operations in 13 Ohio counties during 1986. Clay sales (including material for captive use) totalled 1,086,988 tons, with Tuscarawas, Paulding, Greene, Holmes, and Stark Counties accounting for 81.1 percent of the total sales. The total value[7] of clay sold in 1986 was $5,957,860, with an average price per ton of $5.48. Reported known production of clay was 1,085,585 tons.

An annual average of 35 employees worked an average of 80 days in 1986 mining clay. Total wages reported in 1986 for 33 production employees and 6 nonproduction employees were $633,022. The average annual wage, based on those employees for whom wages were reported, was $16,231. An additional 77 employees mined clay along with one or more other mineral commodities.

Clay mined in Ohio in 1986 was largely for captive use in the production of common clay products, for cement manufacture, and in the manufacture of vitrified products.

[7]Includes reported and estimated values. See footnote 1, p. 7.

TABLE 25.—*1986 Ohio clay sales, by county and type*

County	Tons sold						
	Total	Common clay products	Glazed ware	Vitrified products	Refractories	Cement manufacture	Other
Auglaize	2,001	2,001					
Greene	143,111					143,111	
Hocking	27,685			27,685			
Holmes	74,268	74,268					
Jackson	53,824	36,412			17,412		
Lawrence	26,751	20,882			5,869		
Medina	560	560					
Muskingum	23,941	13,623		9,527			791
Paulding	167,764					167,764	
Perry	40,778	40,160					618
Stark	54,391	3,340	983		10,068		40,000
Tuscarawas	441,487	350,943		69,925	20,619		
Wyandot	30,427	30,427					
TOTAL	1,086,988	572,616	983	107,137	53,968	310,875	41,409

FIGURE 12.—Clay sales in Ohio in 1986, by county.

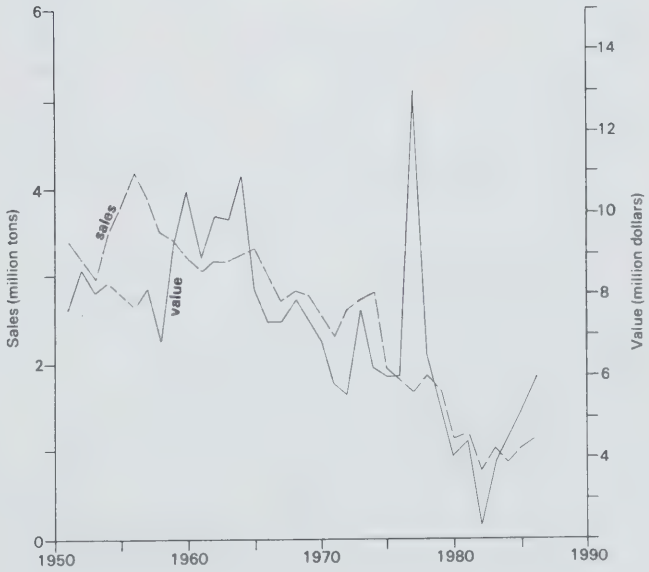


FIGURE 13.—Sales and value of clay in Ohio. Value line dashed where data not available.

SHALE

Shale was produced by 17 companies at 24 operations in 16 Ohio counties during 1986, with production totalling 1,274,178 tons and sales totalling 1,315,526 tons. Tuscarawas, Cuyahoga, Mahoning, Marion, and Medina Counties accounted for 78.9 percent of the total sales. The total value[8] of shale sold (including material for captive use) in 1986 was $1,739,025, with an average price per ton of $1.32.

An annual average of 19 employees worked an average of 166 days in 1986 mining shale. Total wages reported in 1986 for 17 production employees and 2 nonproduction employees were $236,639. The average annual wage, based on those employees for whom wages were reported, was $12,455. An additional 98 employees mined shale along with one or more other mineral commodities in 1986.

Shale mined in Ohio in 1986 was largely for captive use in the production of common clay products and lightweight aggregate, and for cement manufacture.

[8]Includes reported and estimated values. See footnote 1, p. 7.

TABLE 26.—*1986 Ohio shale sales, by county and type*

County	Tons sold						
	Total	Common clay products	Glazed ware	Vitrified products	Cement manufacture	Lightweight aggregate	Other
Columbiana	58,571	58,571					
Coshocton	26,278			6,745			19,533
Cuyahoga	174,066					174,066	
Harrison	43,000			43,000			
Hocking	23,404			23,404			
Holmes	532			532			
Lawrence	52,625				52,625		
Licking	23,944			23,944			
Mahoning	102,085				102,085		
Marion	95,931	95,931					
Medina	62,079	62,079					
Muskingum	8,486				8,486		
Noble	735	735					
Perry	35,640						35,640
Stark	4,331		3,932			399	
Tuscarawas	603,819	343,384		7,036			253,399
TOTAL	1,315,526	560,700	3,932	104,661	163,196	174,465	308,572

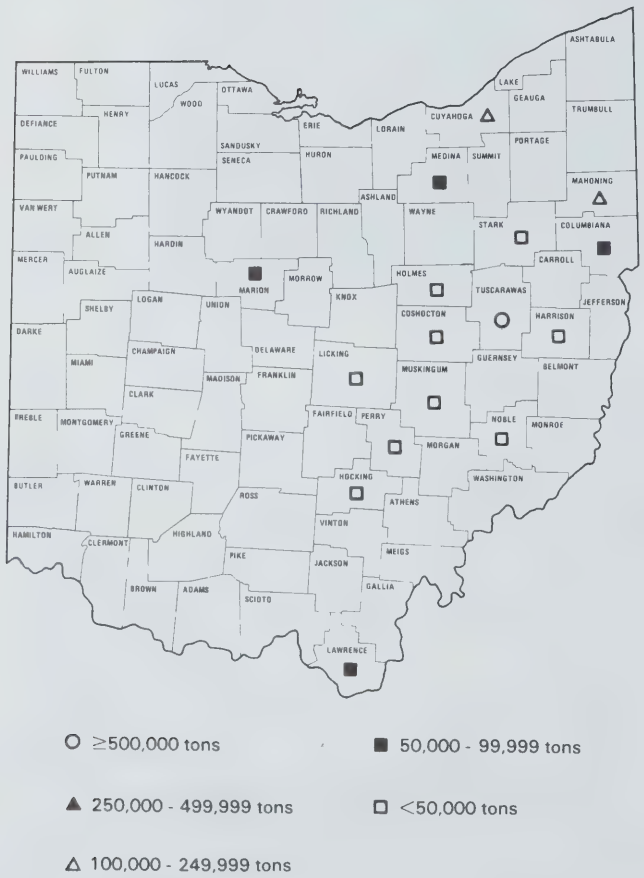


FIGURE 14.—Shale sales in Ohio in 1986, by county.

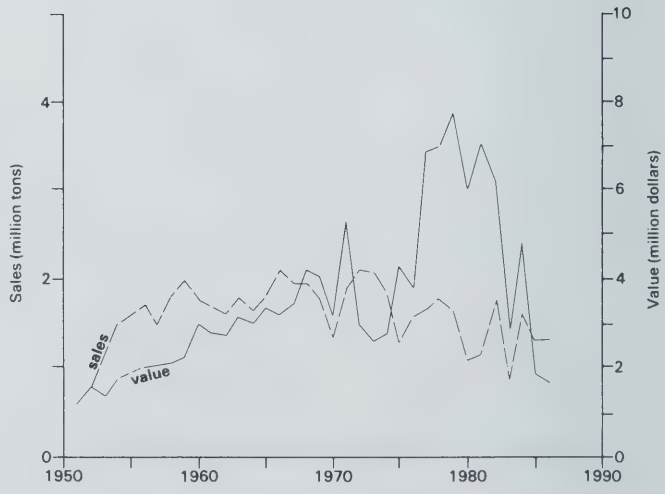


FIGURE 15.—Sales and value of shale in Ohio. Value line dashed where data not available.

GYPSUM

Gypsum was produced by 1 company at 1 operation in 1 Ohio county during 1986. Gypsum production and sales (including material for captive use) totalled 213,972 tons, with Ottawa County accounting for 100 percent of the total sales. The reported value[9] of the gypsum sold was $2,032,736, with an average price per ton of $9.50.

An annual average of 15 employees worked an average of 302 days in 1986 producing gypsum. Total wages reported in 1986 for 15 production employees and 3 nonproduction employees were $914,626. The average annual wage in 1986 was $50,813.

SALT

Salt was produced by 4 companies at 5 operations in 5 Ohio counties during 1986. Rock salt production totalled 3,631,530 tons from 2 underground mines, one each in Cuyahoga and Lake Counties. Three brining operations, one each in Licking, Summit, and Wayne Counties, produced a total of 7,434 tons of salt in brine and 704,433 tons of evaporated salt. Total sales of salt in 1986 amounted to 3,885,824 tons with a total value of $40,890,030. Average price per ton for all salt sold in 1986 was $10.52. Average price per ton of rock salt was $10.17 and of salt in brine and evaporated salt was $12.15.

An annual average of 209 employees worked an average of 320 days in 1986 to produce salt. Total reported wages in 1986 for 209 production employees and 195 nonproduction employees were $12,960,065. The average annual wage in 1986 was $32,079. The primary use for Ohio salt in 1986 was ice control.

PEAT

Peat was produced by 3 companies at 3 operations in 3 Ohio counties during 1986. Peat sales (including material for captive use) totalled 17,184 tons, with Champaign, Wyandot, and Williams Counties accounting for 100 percent of the total sales. The total value of the peat sold in 1986 was $101,544, with an average price per ton of $5.91. Reported known production was 11,162 tons.

Three employees worked an average of 4 days in 1986 producing peat. Total wages reported in 1986 for 3 production employees and 1 nonproduction employee were $4,175. The average annual wage in 1986 was $1,044.

Peat produced in Ohio was used for mulch, soil conditioning, worm culture, and legume inoculation.

[9]Includes reported and estimated values. See footnote 1, p. 7.

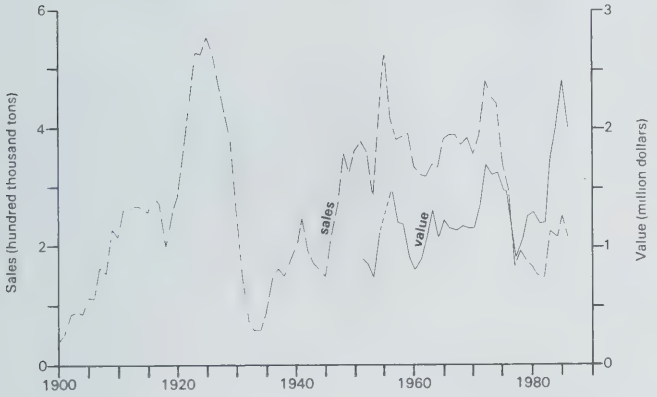


FIGURE 16.—Sales and value of gypsum in Ohio. Value line dashed where data not available. Some figures were calculated because actual figures were not reported in order to maintain confidentiality.

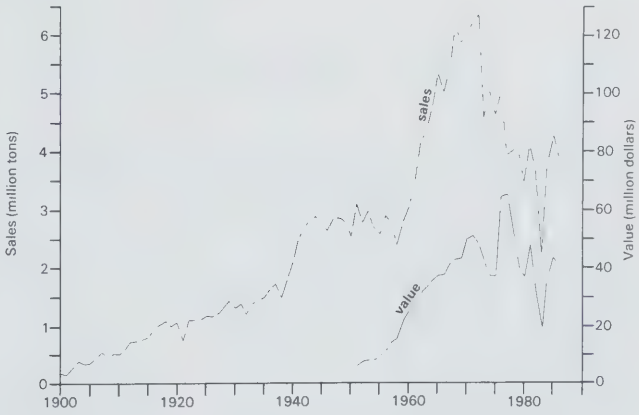


FIGURE 17.—Sales and value of salt in Ohio. Value line dashed where data not available.

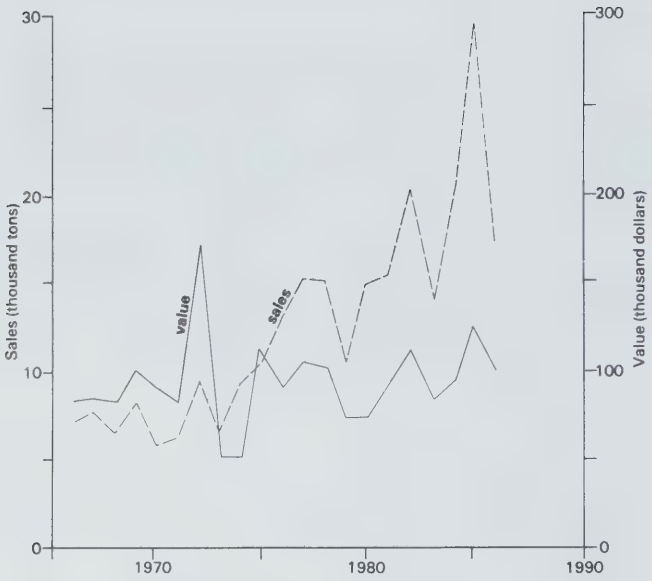


FIGURE 18.—Sales and value of peat in Ohio.

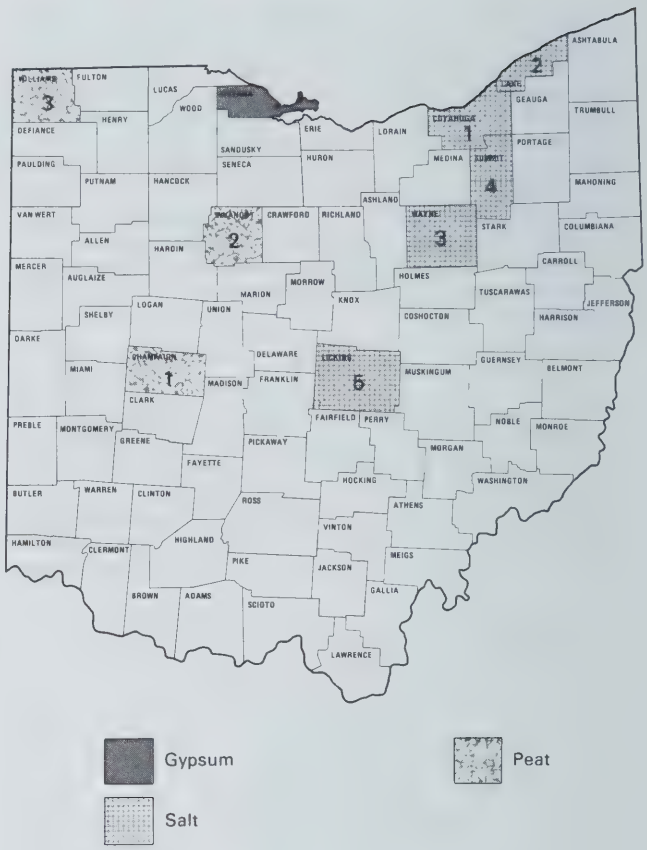


FIGURE 19.—Counties producing gypsum, salt, and peat in Ohio in 1986, and their ranking in sales.

1986 OHIO OIL AND GAS ACTIVITY

This information on oil and gas is modified from T. A. DeBrosse and M. P. McCormac, 1987, Summary of Ohio oil and gas developments in 1986: Ohio Department of Natural Resources, Division of Oil and Gas

A total of 3,046 drilling operations were reported in Ohio during 1986. This figure reflects a decrease of 3,280 drilling operations, or 48.1 percent, compared to 1985. This is the lowest reported total of new drilling operations since 1978. New wells drilled were reported in 57 of the 88 Ohio counties. In comparing the 1986 list of the 10 most active counties with the 1985 list, we note that three counties failed to reappear on the 1986 list. Geauga, Meigs, and Muskingum Counties have dropped from the top 10, and Stark, Tuscarawas, and Portage Counties have been added. This is the first time since 1966 that Muskingum County has not been among the top-10 most active counties. However, it came close in 1986, ranking eleventh.

Wayne County, with a reported total of 200 new well completions, was the most active county in 1986; it was ranked eighth in 1985. The reported new well completions in Wayne County in 1986 consisted of 90 gas wells, 2 oil wells, 104 combination wells, and 4 dry holes. Wells drilled to the "Clinton" sandstone (Silurian) accounted for all but one of the total new wells reported.

Ashtabula County, with a total of 186 reported new well completions, was the second most active county in 1986. This county was the most active county in 1985. All but two of the new wells reported for Ashtabula County were completed in the "Clinton" sandstone.

Third-ranked Coshocton County, with 181 reported new well completions, advanced from fifth rank in 1985. All but 11 of the reported new wells were drilled to the "Clinton" sandstone. Fourth-ranked Washington County, with 155 reported new well completions, dropped from second place in 1985. In 1986 Washington County had the most Berea

Sandstone completions, with 60 reported. Fifth-ranked Perry County, with 144 reported new well completions, moved up from sixth place in 1985. Of the top-10 counties in 1986, Perry County is the only one to have appeared consistently on the top-10 list since 1970.

Stark County, with 133 reported new well completions, was ranked sixth in 1986. Trumbull County maintained its seventh rank in 1986 with 132 reported new well completions. Tuscarawas County was ranked eighth in 1986 with 130 reported new well completions. Neither Stark nor Tuscarawas County appeared on the 1985 top-10 list. Stark and Trumbull Counties had a 100 percent productive rate, with the "Clinton" sandstone accounting for all the new wells in these counties.

Ninth-ranked Summit County, with 125 reported new well completions, dropped from fourth place in 1985. Portage County, with 116 reported new well completions, rounded out the top 10 in 1986.

The total number of new wells drilled for oil and gas production in 1986 was 2,967, of which 2,766, or 93.23 percent, were productive and 201 were dry holes. The productive wells consisted of 880 gas wells, 174 oil wells, and 1,712 combination wells. A total of 98 new wells drilled were classified as exploratory wells; 51 (52 percent) of these wells were productive and 47 were dry holes. The total new-well footage drilled in 1986 was 11,111,568 feet, compared to a total of 23,351,818 feet in 1985. The average depth per new well drilled for oil and gas was 3,745 feet, a decrease of 4 feet per well compared to the 1985 average. New "Clinton" wells averaged 4,195 feet in depth.

The total reported crude oil production in Ohio for 1986 was 13,442,162 barrels. This figure reflects a decrease of 1,545,430 barrels, or 10.31 percent, compared to 1985 production. The dollar value of the crude oil produced in Ohio in 1986 was $208,297,877, which is $167,124,080, or 44.52 percent, less than the value of the 1985 production. The average price paid per barrel was $15.50, a decrease of $9.55 per barrel from the 1985 price. The lowest price in 1986 for Appalachian crude grades was $9.25 per barrel in July.

Natural gas production in Ohio during 1986 was 182,072,348 MCF. This figure includes an estimated 1,785,023 MCF of gas utilized on the lease. In comparing the total volume of natural gas produced in Ohio in 1986 with the 1985 total, we note a decrease of 171,884 MCF, or 0.09 percent. The dollar value of the natural gas produced in Ohio in 1986 was $512,108,474. The value of the estimated volume of gas utilized on the lease was not used in computing this value. The dollar value of 1986 gas production was $42,838,230, or 7.72 percent, less than the value of 1985 production. The average price paid per MCF was $2.81, a decrease of $0.235 per MCF from the 1985 price.

The combined total value of Ohio's 1986 crude oil and natural gas production was $720,406,351, a decrease of $209,962,310, or 22.56 percent, from 1985. As of December 31, 1986, there was a total of 62,380 active wells in the state. These wells consisted of 32,721 gas wells and 29,659 oil wells.

FIGURE 20.—Production of oil and gas in Ohio.

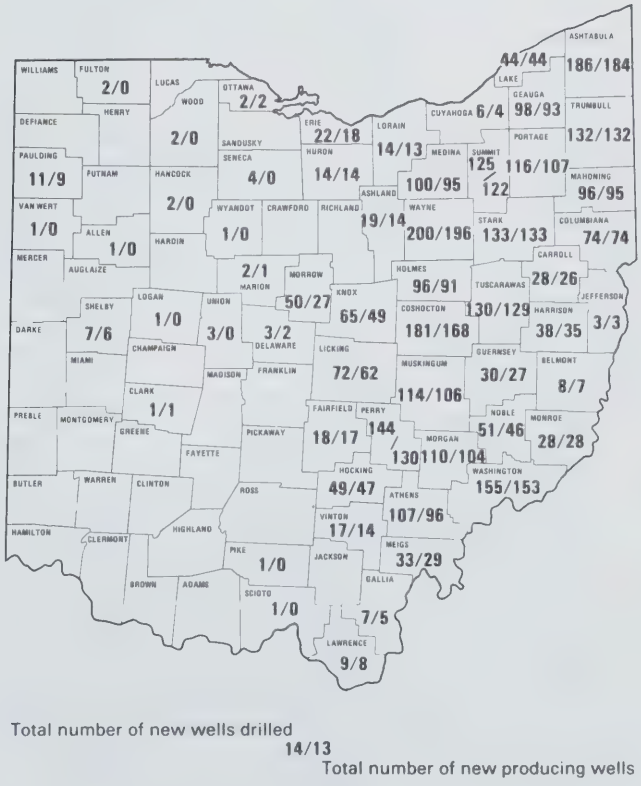


FIGURE 21.—New wells drilled for oil and gas in 1986, by county.

TABLE 27.—*1986 Ohio summary of new oil and gas well drilling, by county*

County[1]	Gas wells			Oil wells			Combination wells				Total producing wells				Dry holes		Total wells	Total footage	Percent productive
	No.	MCFGPD[2]	Footage	No.	BOPD[2]	Footage	No.	MCFGPD[2]	BOPD[2]	Footage	No.	MCFGPD[2]	BOPD[2]	Footage	No.	Footage			
Allen															1	1,332	1	1,332	0.00
Ashland	3	190	8,433	10	43	10,964	1	25	6	3,088	14	215	49	22,485	5	3,841	19	26,326	73.68
Ashtabula	67	38,940	231,384	1	100	3,154	116	17,032	264	430,093	184	55,972	364	664,631	2	7,648	186	672,279	98.92
Athens	42	12,235	165,251	14	139	37,655	40	5,408	327	138,789	96	17,643	466	341,695	11	30,474	107	372,169	89.72
Belmont	4	23	23,366				3	165	57	8,036	7	188	57	31,402	1	2,728	8	34,130	87.50
Carroll	1	50	6,057				25	826	392	135,985	26	876	392	142,042	2	7,820	28	149,862	92.86
Clark	1	2	2,420								1	2	0	2,420			1	2,420	100.00
Columbiana	25	2,643	132,793				49	5,592	126	282,874	74	8,235	126	415,667			74	415,667	100.00
Coshocton	22	3,862	102,319	16	97	56,603	130	18,666	787	501,428	168	22,528	884	660,350	13	51,523	181	711,873	92.82
Cuyahoga	1	125	3,250				3	1,220	25	9,177	4	1,345	25	12,427	2	6,687	6	19,114	66.67
Delaware	2	550	7,160								2	550	0	7,160	1	600	3	7,760	66.67
Erie	18	11,736	16,718								18	11,736	0	16,718	4	14,415	22	31,133	81.82
Fairfield	3	83	6,359	2	6	5,253	12	279	77	29,822	17	362	83	41,434	1	2,862	18	44,296	94.44
Fulton															2	6,200	2	6,200	0.00
Gallia	1	10	802				4	49	9	7,222	5	59	9	8,024	2	2,062	7	10,086	71.43
Geauga	17	18,170	68,515				76	30,630	141	313,361	93	48,800	141	381,876	5	19,995	98	401,871	94.90
Guernsey	16	740	88,725				11	772	53	59,651	27	1,512	53	148,376	3	13,897	30	162,273	90.00
Hancock															2	2,882	2	2,882	0.00
Harrison	20	434	123,342				15	885	32	89,168	35	1,319	32	212,510	3	17,548	38	230,058	92.11
Hocking	2	60	3,670	11	113	35,939	34	815	318	103,236	47	875	431	142,845	2	6,847	49	149,692	95.92
Holmes	30	2,731	113,938	3	21	10,269	58	2,892	288	195,230	91	5,623	309	319,437	5	11,999	96	331,436	94.79
Huron	13	3,535	11,191				1	25	3	1,022	14	3,560	3	12,213			14	12,213	100.00
Jefferson	3	480	5,070								3	480	0	5,070			3	5,070	100.00
Knox	7	1,479	16,912	11	59	28,764	31	1,266	280	91,196	49	2,745	339	136,872	16	28,819	65	165,691	75.38
Lake	23	22,828	66,064				21	5,662	46	67,243	44	28,490	46	133,307			44	133,307	100.00
Lawrence	2	45	3,760	6	41	4,143					8	45	41	7,903	1	2,951	9	10,854	88.89
Licking	6	1,080	14,987	25	123	48,491	31	799	353	72,280	62	1,879	476	135,758	10	21,399	72	157,157	86.11
Logan															1	2,450	1	2,450	0.00
Lorain	7	812	10,390				6	392	19	16,953	13	1,204	19	27,343	1	1,689	14	29,032	92.86
Mahoning	39	16,983	146,847				56	11,527	380	300,239	95	28,510	380	447,086	1	510	96	447,596	98.96
Marion	1	100	2,700								1	100	0	2,700	1	1,985	2	4,685	50.00
Medina	15	1,810	49,999	10	17	6,320	70	5,198	392	246,002	95	7,008	409	302,321	5	6,098	100	308,419	95.00
Meigs	14	790	39,537				15	538	70	26,045	29	1,328	70	65,582	4	8,260	33	73,842	87.88
Monroe	9	355	27,211	2	2	1,710	17	1,647	84	43,637	28	2,002	86	72,558			28	72,558	100.00
Morgan	49	5,759	229,236	2	54	2,870	53	2,145	194	129,344	104	7,904	248	361,450	6	29,662	110	391,112	94.55
Morrow	11	1,500	22,716	5	119	18,584	11	2,185	404	40,680	27	3,685	523	81,980	23	84,729	50	166,709	54.00
Muskingum	29	5,857	112,892	10	36	25,502	67	9,746	424	269,579	106	15,603	460	407,973	8	39,756	114	447,729	92.98
Noble	28	3,992	145,241	1	4	1,164	17	3,868	80	67,976	46	7,860	84	214,381	5	27,053	51	241,434	90.20
Ottawa	2	105	2,822								2	105	0	2,822			2	2,822	100.00
Paulding							9	1,725	90	12,888	9	1,725	90	12,888	2	3,022	11	15,910	81.82
Perry	21	2,378	61,606	29	140	78,717	80	3,299	537	262,588	130	5,677	677	402,911	14	39,505	144	442,416	90.28
Pike															1	289	1	289	0.00
Portage	19	1,891	44,427				88	7,507	729	401,456	107	9,398	729	445,883	9	23,409	116	469,292	92.24
Scioto															1	1,475	1	1,475	0.00
Seneca															4	10,277	4	10,277	0.00
Shelby	5	53	6,452				1	1	2	1,358	6	54	2	7,810	1	3,221	7	11,031	85.71
Stark	29	2,940	130,583	1	15	5,140	103	6,519	754	485,013	133	9,459	769	620,736			133	620,736	100.00
Summit	20	3,125	77,416				102	11,140	658	404,661	122	14,265	658	482,077	3	8,373	125	490,450	97.60
Trumbull	53	42,113	249,753				79	27,347	216	362,626	132	69,460	216	612,379			132	612,379	100.00
Tuscarawas	22	901	100,734				107	7,103	219	526,941	129	8,004	219	627,675	1	1,070	130	628,745	99.23
Union															3	7,320	3	7,320	0.00
Van Wert															1	1,304	1	1,304	0.00
Vinton	5	644	11,292	3	22	7,369	6	63	25	8,447	14	707	47	27,108	3	6,066	17	33,174	82.35
Washington	83	14,025	374,840	10	37	17,883	60	4,052	276	170,692	153	18,077	313	563,415	2	3,340	155	566,755	98.71
Wayne	90	9,218	336,223	2	82	7,368	104	9,032	390	377,883	196	18,250	472	721,474	4	16,837	200	738,311	98.00
Wood															2	3,680	2	3,680	0.00
Wyandot															1	2,485	1	2,485	0.00
TOTAL	880	237,382	3,405,403	174	1,270	413,862	1,712	208,042	9,527	6,693,909	2,766	445,424	10,797	10,513,174	201	598,394	2,967	11,111,568	93.23

[1]The following counties reported no wells drilled in 1986: Adams, Auglaize, Brown, Butler, Champaign, Clermont, Clinton, Crawford, Darke, Defiance, Fayette, Franklin, Greene, Hamilton, Hardin, Henry, Highland, Jackson, Lucas, Madison, Mercer, Miami, Montgomery, Pickaway, Preble, Putnam, Richland, Ross, Sandusky, Warren, and Williams.

[2]MCFGPD, thousand cubic feet of gas per day; BOPD, barrels of oil per day.

TABLE 28.—*1986 Ohio summary of new oil and gas well drilling by producing zone*

Producing zone	No. of producing wells	No. of dry holes	Total no. of wells	Total footage	Percent productive
Pennsylvanian undifferentiated	35	7	42	35,477	83.33
Upper Mississippian undifferentiated	8	0	8	11,915	100.00
Lower Mississippian "1st & 2nd Berea"	260	38	298	394,977	87.25
Devonian					
Ohio Shale	72	4	76	246,179	94.74
"Big Lime"	41	1	42	41,436	97.62
Oriskany	13	2	15	47,387	86.67
Silurian					
"Newburg"	6	1	7	16,345	85.71
"Clinton-Medina"	2,282	94	2,376	9,968,134	96.04
Lower Ordovician Trenton-Rose Run	28	13	41	134,595	68.29
Cambrian undifferentiated	21	41	62	215,123	33.87
Precambrian	0	0	0	0	0.00
TOTAL	2,766	201	2,967	11,111,568	93.23

TABLE 29.—*Ohio new well completions[1], 1976-1986*

Year	Gas wells		Oil wells		Combination wells		Dry holes		Total wells
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
1976	816	42.14	213	11.00	743	38.37	164	8.47	1,936
1977	844	32.16	372	14.18	1,237	47.14	171	6.52	2,624
1978	844	32.39	273	10.47	1,273	48.85	216	8.29	2,606
1979	1,097	31.86	251	7.29	1,927	55.97	168	4.88	3,443
1980	818	24.37	276	8.22	2,154	64.18	108	3.22	3,356
1981	1,256	23.15	394	7.26	3,419	63.02	356	6.56	5,425
1982	1,095	23.59	317	6.83	2,901	62.49	329	7.09	4,642
1983	1,601	25.96	471	7.63	3,664	59.43	429	6.95	6,165
1984	1,331	26.65	282	5.64	3,008	60.24	372	7.45	4,993
1985	1,829	29.36	306	4.91	3,738	60.01	355	5.70	6,228
1986	880	29.66	174	5.86	1,712	57.70	201	6.77	2,967

[1]Does not include wells reopened, gas-storage wells, or secondary-recovery or service wells.

TABLE 30.—*Ohio crude oil and gas production and reserves, 1976-1986*

Year	Oil		Gas	
	Production (thousand barrels)	Reserves[1] (thousand barrels)	Production (thousand MCF)	Reserves (thousand MCF) (exclusive of storage)
1976	9,994	125,268	89,770	1,025,950
1977	10,359	129,148	99,656	1,093,150
1978	11,154	131,194	115,239	1,177,511
1979	11,953	137,718	124,665	1,313,333
1980	12,928	116,000[2]	138,856	1,436,629
1981	13,551	112,000[2]	141,134	1,689,745
1982	14,571	111,000[2]	138,391	1,730,691
1983	14,971	130,000[2]	151,300	1,557,708
1984	15,271	116,000[2]	186,480	1,405,681
1985	14,988	79,000[2]	182,245	1,585,925
1986	13,442	[2]	182,072[3]	1,578,177

[1]Based on data from American Petroleum Institute.
[2]Based on data from U.S. Department of Energy, Energy Information Administration. 1986 figure not available.
[3]Included in this total is an estimated 1,785,023 MCF of gas utilized in the field.

TABLE 31.—*Ohio counties[1] and their Division of Mines abbreviations[2]*

County	*Abbreviation*	*County*	*Abbreviation*	*County*	*Abbreviation*
Adams	Ads	Hamilton	Hmn	Noble	Ne
Allen	An	Hancock	Hk	Ottawa	Oa
Ashland	Ald	Hardin	Hdn	Paulding	Pg
Ashtabula	Asa	Harrison	Hn	Perry	Py
Athens	As	Henry	Hy	Pickaway	Pky
Auglaize	Ae	Highland	Hd	Pike	Pke
Belmont	Bt	Hocking	Hg	Portage	Pe
Brown	Bn	Holmes	Hs	Preble	Pre
Butler	Br	Huron	Hrn	Putnam	Pm
Carroll	Cl	Jackson	Jkn	Richland	Rd
Champaign	Cpn	Jefferson	Jfn	Ross	Rs
Clark	Ck	Knox	Kx	Sandusky	Sy
Clermont	Ct	Lake	Lke	Scioto	So
Clinton	Cln	Lawrence	Le	Seneca	Sa
Columbiana	Ca	Licking	Lg	Shelby	Shy
Coshocton	Cn	Logan	Lgn	Stark	Sk
Crawford	Cd	Lorain	Ln	Summit	St
Cuyahoga	Cya	Lucas	Ls	Trumbull	Tl
Darke	Dke	Madison	Mdn	Tuscarawas	Ts
Defiance	De	Mahoning	Mg	Union	Un
Delaware	Del	Marion	Mn	Van Wert	Vt
Erie	Ee	Medina	Ma	Vinton	Vn
Fairfield	Fd	Meigs	Ms	Warren	Wan
Fayette	Fe	Mercer	Mr	Washington	Wn
Franklin	Fn	Miami	Mi	Wayne	We
Fulton	Ftn	Monroe	Me	Williams	Ws
Gallia	Ga	Montgomery	My	Wood	Wd
Geauga	Gea	Morgan	Mon	Wyandot	Wt
Greene	Ge	Morrow	Mw		
Guernsey	Gy	Muskingum	Mum		

[1]Fulton and Madison Counties produced no mineral commodities during 1986.
[2]As used for Division of Mines mine numbers.

Ox teams were common transportation in the Hanging Rock Iron Region in the 1800's

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Angel Valley Mining, Inc. P.O. Box 715 New Philadelphia OH 44663 216-343-0947 Richard W. Easlick, owner	Angel Valley Mining, Inc. (286)	Tuscarawas	7,325	Ts-1955	D-0439
Anthony Mining Co., Inc. P.O. Box 1298 Steubenville, OH 43952 614-282-7811 Joseph J. Sperlazza, pres.	Pipo #51 (189) Maine 307 (190)	Jefferson Jefferson	46,585 112,186	Jfn-788 Jfn-789	D-0327 D-0307
Arapaho Mining, Inc. P.O. Box 542 New Philadelphia, OH 44663 216-343-4478 Merle A. Clum, pres.	Arapaho Mining, Inc. (287) Arapaho Mining, Inc. (353)	Tuscarawas Tuscarawas	47,542 18,122	Ts-1956 Ts-1979	D-0103 D-0601
Arrow Head Energy, Inc. 1270 Trenton Ave. Ext. Uhrichsville, OH 44683 614-922-3743 Charles L. Smith, pres.	Hopkins-Schupp (265)	Tuscarawas	24,597	Ts-1890	D-0418
B & C Coal, Inc. Rte. 1 Box 88B Albany, OH 45710 614-698-6352 Leo Burritt, pres.	Ginsburg Mine (1)	Athens	10,048	As-591	D-0501
B & D Coal, Inc. P.O. Box 134 Hamden, OH 45634 614-384-3404 Jerald B. Eberts, pres.	B & D Coal #2 (169) B & D Coal #1 (298)	Jackson Vinton	44,002 27,828	Jkn-570 Vn-623	D-0207 C-0993, D-0294
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 614-783-3575 Gilbert Baker, pres.	Pipeline (230) Sorg (233) Guiler (231) Shook (303) Lincoln Pit (304)	Noble Noble Noble Washington Washington	15,441 1,995 268,255 4,226 176,976	Ne-137 Ne-138 Ne-146 Wn-1004 Wn-1005	D-0329 D-0082 D-0343 D-0209 D-0183
Bannock Coal Co. 43249 Harrah St. P.O. Box 98 Lafferty, OH 43951 614-968-3582 Tony Gentile, pres.	Michelena (9) Uniontown (55) Shippy (311)	Belmont Belmont Belmont	144,455 32,054 124,122	Bt-133 Bt-1136 Bt-1147	D-0471 D-0509 D-0590
Belville Mining Co., Inc. P.O. Box 309 Wheelersburg, OH 45694 614-574-8464 Thomas J. Belville, pres.	Brady Creek Mine #1 (202)	Lawrence	126,208	Le-432	D-0107
Benedict, Inc. P.O. Box 315 McArthur, OH 45651 614-596-5226 W. E. Engle, pres.	Puckett (355) Benedict, Inc. (356) Mitchell Hollow (357) Zimmerman (358) Zaleski (356)	Vinton Vinton Vinton Vinton Vinton	8,396 13,734 27,132 357 34,865	Vn-170 Vn-171 Vn-172 Vn-179 Vn-180	D-0094 D-0249 D-0445 D-0504 D-0249
Bennoc, Inc. P.O. Box 208 Morristown, OH 43759 614-782-1330 Larry Conway, pres.	Quaker (229)	Noble	5,885	Ne-136	C-1154
Blum Coal Co. Scio-Carrollton Rd. P.O. Box 232 Carrollton, OH 44615-0232 216-627-5232 Raymond Blum, owner	Blum-Pickens Pit (71) DeAngelo Pit (321) Guilford Lake Job (103)	Carroll Columbiana Columbiana	16,054 13,504 31,258	Cl-231 Ca-938 Ca-B[1]	D-0530 IM-937 D-0039
Boich Mining Co. P.O. Box 148 Bloomingdale, OH 43910 614-733-7311 Michael M. Boich, owner	Boich Mining Co. (178)	Jefferson	320,003	Jfn-528	C-1498, D-0247
David Boyle, Inc. 2020 Airport Rd. New Lexington, OH 43764 614-342-2059 David R. Boyle, pres.	#1 Strip (330)	Hocking	10,023	Hg-321	D-0531

[1]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Burning Hollow Coal Co., Inc. P.O. Box 88 Gnadenhutten, OH 44629 614-254-4328 Raymond Lahmers, Jr., pres.	#2 Pit (277)	Tuscarawas	9,560	Ts-1932	D-0124
C K & K, Inc. R.D. 4 Box 4600 New Philadelphia, OH 44663 614-922-0797 Ronald M. Garrett, pres.	C K & K, Inc. (141) C K & K, Inc. (351)	Harrison Tuscarawas	24,090 24,566	Hn-208 Ts-1974	D-0245 D-0580
C M Mining, Inc. 7001 Ridge Rd. S P.O. Box 267 East Sparta, OH 44626-0267 216-484-6355 Bruce T. Burrow, pres.	#1 C M Mine (198)	Stark	17,968	Sk-214	IM-798
Cardinal Mining, Inc. 4014 Butler-Grange Rd. Salem, OH 44460 216-222-1487 Sonny R. Rawson, pres.	Brown (381)	Columbiana	33,156	Ca-C[2]	D-0585
Center Mining Co. 6950 State Rte. 164 Lisbon, OH 44432 216-424-3938 Robert Ullom, owner	Ullom (317)	Columbiana	2,465	Ca-904	D-0144
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 J. E. Katlic, pres.	Muskingum Mine (228)	Muskingum, Noble	3,376,948	Ne-41	D-0056, D-0127, D-0261, D-0274
Coalbrook Mining, Inc. 42891 Kelly Park Rd. Columbiana, OH 44408 216-482-2365 Wilmer A. Davis, pres.	Toth Strip (80)	Columbiana	28,733	Ca-854	D-0389
Collins Mining Co. Rte. 2 Box 48 Ironton, OH 45638 614-532-9414 O. C. Collins, owner	Campground Job (380)	Lawrence	47,328	Le-442	D-0498
Commercial Minerals, Inc. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 216-424-1463 W. Thomas Mackall, pres.	Dungannon (78) West Point (98)	Columbiana Columbiana	22,263 59,884	Ca-829 Ca-919	D-0024 D-0048, D-0412
Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-942-4641 Ben Statler, v. pres.	Franklin #125 (137) Oak Park #107 (148) Mahoning Valley #33 (150)	Belmont, Harrison Harrison Harrison	154,646 1,308,819 2,701	Hn-203 Hn-658 Hn-700	D-0174, D-0323 D-0357 D-0030, D-0054, D-0334
Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Kriechbaum (4) Malcuit-2400 #1 (11) Hendrysburg (12) Krulock (26) Malcuit-Ward-Bailey (47) Hendrysburg West (52) Barnesville-Temple (309) Rix Mills (222) Anco Seven Coal (347) Toad Hollow (349)	Belmont Belmont Belmont Belmont Belmont Belmont Belmont Muskingum Tuscarawas Tuscarawas	12,852 28,158 3,862 15,618 33,503 204,002 164,240 117,144 7,890 3,488	Bt-78 Bt-146 Bt-147C[3] Bt-998 Bt-1118 Bt-1131 Bt-1143 Mum-249 Ts-1970 Ts-1972	IM-733 C-1027, D-0267 D-0311 D-0233 D-0396 D-0507 D-0573 D-0299 D-0562 D-0576
Crawford Coal Co. 605 W. Lincoln Way Lisbon, OH 44432 216-424-7366 Raymond & R. Ronald Crawford, partners	Crawford Coal Co. (77)	Columbiana	20,967	Ca-827	D-0243
Crooksville Coal Co. P.O. Box 149 Crooksville, OH 43731 614-697-7064 Ralph L. Allen, pres.	Crooksville Strip (239)	Perry	234,107	Py-317	D-0057, D-0085

[2]No mine number has been assigned by the Division of Mines.
[3]This mine number has been duplicated for another company.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Crooksville Coal Co. Strip-Tri-State Coal Sales, Inc. State Rte. 345 Rte. 2 P.O. Box 754 New Lexington, OH 43764 614-342-3512 Steve L. Allen, pres.	Crooksville Coal Co. Strip-Tri-State Coal (240)	Perry	69,983	Py-317C[4]	D-0461
Crown City Mining, Inc. 6422 E. Main St. Reynoldsburg, OH 43068 614-866-6505 David L. Jamison, pres.	Crown City Mine (125)	Gallia, Lawrence	461,652	Ga-220	C-0758, C-1247, C-1390, C-1486, D-0092, D-0123, D-0201, D-0221, D-0279
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3127 Donald Thompson, pres.	Jack Foster (82) John Foster Strip (84) Dickson (85) Lyons Pit (86)	Columbiana Columbiana Columbiana Columbiana	14,235 19,340 16,566 17,698	Ca-872 Ca-885 Ca-888 Ca-891	C-0744 C-0137 C-1258, D-0379 D-0032
D & L Contractors, Inc. P.O. Box 446 Flushing, OH 43977 614-968-4913 Walter Dombroski, pres.	D & L Strip (185)	Jefferson	76,039	Jfn-780	D-0126
Daft Coal Co. P.O. Box 309 McArthur, OH 45651 614-596-4127 Lawrence Daft, pres.	Daft Coal Co. (329)	Hocking	17,849	Hg-253	D-0242
Daron Coal Co. 3335 Steubenville Rd. SE Carrollton, OH 46615 216-739-5011 Ronald Selway, owner	Harstine (274) Marino (344)	Tuscarawas Tuscarawas	87,375 29,948	Ts-1924 Ts-1966	D-0080 D-0513
Dennis Clay Co. State Rte. 37 Box 10922 New Lexington, OH 43764 614-342-5269 Tom L. Dennis, owner	Browning Mine (339)	Perry	35,166	Py-331	IM-920
DiChiera Coal Co. Box 542 Uhrichsville, OH 44683 614-269-9143 Michael DiChiera, owner	DiChiera Coal Co. (289)	Tuscarawas	5,593	Ts-1959	D-0479
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-549-2165 R. E. Mackall, pres.	Franklin Square (74) "W" Mine (89) "J" Mine (322) "K" Mine (206) "C" Mine (210) "HP" Mine (211)	Columbiana Columbiana Columbiana Mahoning Mahoning Mahoning	36,026 10,973 27,947 84,230 6,875 143,624	Ca-344 Ca-894 Ca-953 Mg-603 Mg-C[5] Mg-HP[5]	D-0364 D-0041 D-0539 C-1452 D-0139 D-0468
East Ohio Limestone Co. P.O. Box 699 Hartville, OH 44632 216-877-2636 Donald D. Phillips, partner	East Ohio Limestone Co. (255)	Stark	3,283	Sk-663	IM-5
Eberhart Coal, Inc. 6406 Cleveland Ave. S East Sparta, OH 44626 216-484-4261 Phillip H. Eberhart, pres.	Eberhart #2 Hott Strip (259) Eberhart #2 Hott Strip (260) Eberhart #2 Hott Strip (263) Eberhart #2 Hott Strip (270)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas	53,717 8,833 26,088 49,956	Ts-1526 Ts-1620 Ts-1882 Ts-1919	C-1195, D-0330 D-0218 D-0013 D-0075
R. A. Eberts Co. P.O. Box 191 Jackson, OH 45650 614-286-2975 Phil A. Bowman, owner	McArthur Pit (294)	Vinton	104,881	Vn-163[6]	D-0210
Eberts Coal Co., Inc. P.O. Box 66 Hamden, OH 45634 614-384-3784 James R. Eberts, pres.	Quarry Mine (294)	Vinton	30,900	Vn-163[7]	D-0210
Elk Coal Co., Inc. P.O. Box 165 McArthur, OH 45651 614-596-5520 John C. Cline, pres.	Bowling Strip (171) Elk Strip (296)	Jackson Vinton	61,615 3,008	Jkn-576 Vn-176	D-0204 D-0366

[4]This mine number has been duplicated for another company.
[5]No mine number has been assigned by the Division of Mines.
[6]Eberts Coal Co., Inc. operated this mine for the first quarter of 1986. See also R. A. Eberts Co.
[7]R. A. Eberts Co. operated this mine for the second, third, and fourth quarters of 1986. See also Eberts Coal Co. Inc.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Empire Coal Co. P.O. Box 729 Gnadenhutten, OH 44629 614-254-4395 Bruce V. Work, pres.	Empire Coal Co. (256)	Tuscarawas	318,143	Ts-115	C-1467, D-0190, D-0199, D-0217, D-0341
	Anco Strip (291)	Tuscarawas	78,970	Ts-1963	D-0512
	Dichler (292)	Tuscarawas	81,101	Ts-1964	D-0516
ENZ, Inc. Rte. 1 Box 444 Dover, OH 44622 216-364-8621 Michael J. Hugo, owner	Sickafoose Pit (246)	Stark	97,034	Sk-208	IM-822, IM-861, D-0295
F & M Coal Co. Costonia Rd. Box 171 Toronto, OH 43964 614-544-5203 Edward Fiala, owner	E & E Strip (186)	Jefferson	30,782	Jfn-784	D-0091
Fairpoint Coal Co. P.O. Box 158 Fairpoint, OH 43927 614-695-3174 Louie Zaccagnini, pres.	Mel-Worth (19)	Belmont	7,519	Bt-927	C-1475, D-0483
	Shepardstown (139)	Harrison	8,970	Hn-205	D-0155
G & M Mineral Co. P.O. Box 345 Berlin, OH 44610 216-893-2721 Emanuel E. Mullet, pres.	G & M Mineral Co. (106)	Coshocton	54,231	Cn-757	C-1426
GEX Hardy, Inc. P.O. Box 340 Sugarcreek, OH 44681 216-852-2431 J. J. Blazer, pres.	Flushing (33)	Belmont	305,918	Bt-1099	D-0244, D-0291
	Ragersville (283)	Tuscarawas	12,263	Ts-1946	D-0335
	Burkey (345)	Tuscarawas	54,991	Ts-1968	D-0549
Green & Burritt Coal Co., Inc. P.O. Box 422 Wellston, OH 45692 614-384-5780 Wayne Green, pres.	Green Strip (127)	Gallia	59,168	Ga-242	C-1326, D-0226
Hillcrest Coal, Ltd. 190 S. Main St. Magnolia, OH 44643 216-866-9388 Kermit & Richard James, Jr., partners	Hillcrest Coal (250)	Stark	16,116	Sk-221	C-1551, D-0380
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-893-2721 Emanuel E. Mullet, pres.	241 Plant (161)	Holmes	31,576	Hs-67	IM-3, IM-768
	Wayne Mine (162)	Holmes	42,086	Hs-79	IM-656
	Charm Pits (164)	Holmes	333,987	Hs-86	D-0193
	Rodco (104)	Holmes	20,637	Hs-87	D-0352
	Bolivar Mine (363)	Stark	5,677	Sk-235	IM-945
Horizon Coal Corp. P.O. Box 618 Beach City, OH 44608 216-756-2414 Emanuel E. Mullet, pres.	Horizon Strip-Canton (251)	Stark	45,309	Sk-223	D-0087
	Horizon Strip-East Sparta (254)	Stark	41,146	Sk-230	D-0444
	Horizon Strip-Belden (280)	Tuscarawas	81,459	Ts-1941	D-0224
	Horizon Strip-Ladrach (290)	Tuscarawas	15,653	Ts-1962	D-0499
Huberta Coal Co. Box 728 Steubenville, OH 43952 614-282-5301 Teresa C. Schiappa, pres.	Rose Valley-587 (326)	Harrison	14,883	Hn-222	D-0587
Hutson Road Mining Co. 1200 W. South Range Rd. North Lima, OH 44452 216-549-5214 John L. Curatole, owner	Hutson Road Mining Co. (96)	Columbiana	488	Ca-917	D-0391
Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 216-337-9511 John C. Grisham, pres.	Burns (66)	Carroll	1,293	Cl-223	D-0406
	Jones (67)	Carroll	11,814	Cl-225	D-0437
	Trares (94)	Columbiana	1,504	Ca-909	D-0164
	Industrial Mining Co. (372)	Columbiana	39,904	Ca-932	D-0532
	Industrial Mining Co. (371)	Columbiana	48,862	Ca-I[a]	D-0592
	Starn (194)	Jefferson	14,025	Jfn-794	D-0480
	Industrial Mining Co. (366)	Stark	54,188	Sk-236	
J & W Mining Co. 58490 Mt. Victory Rd. Jacobsburg, OH 43933 614-795-4013 W. E. Ramsey, owner	J & W Mining Co. (307)	Belmont	666	Bt-1134	D-0496

[a]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
J D Mining, Inc. Rte. 4 Box 4229A New Philadelphia, OH 44663 216-339-4900 John R. Demuth, pres.	Demuth Pit (279) Baltzley Valley Mine (346)	Tuscarawas Tuscarawas	11,329 47,042	Ts-1936 Ts-1969	D-0172 D-0572
James Bros. Coal Co. 190 S. Main St. P.O. Box 425 Magnolia, OH 44643 216-866-9388 Richard, Jr., & Kermit James, partners	James Bros. Coal Co. (59) James Bros. Coal Co. (61)	Carroll Carroll	56,919 75,332	Cl-17 Cl-162	C-1232, D-0282 C-1155, C-1405, D-0408
Jeffco Sales & Mining Co. R.D. 1 Box 480 Steubenville, OH 43952 614-282-5929 Frank T. Salonica, pres.	"39" McCormick Run (90) Sun Valley #1 (315)	Columbiana Jefferson	10,909 6,139	Ca-895 Jfn-J[9]	D-0104 D-0583
Jefferson Holding, Inc. R.D. 1 Bergholz, OH 43908 614-768-2272 Thomas M. Williams, owner	Junior #1 Strip (199)	Jefferson	1	Jfn-1277	D-0099
Johnson Mining Co. 39150 Churchill Rd. Lisbon, OH 44432 216-424-5113 Robert Johnson, owner	Johnson Strip (88) Johnson Mining (361)	Columbiana Columbiana	28,850 9,037	Ca-893 Ca-922	D-0173 D-0565
Joyce Coal Co. P.O. Box 264 St. Clairsville, OH 43950 614-782-1330 Andy Massamino, pres.	Crescent (23)	Belmont	96,853	Bt-980	D-0258, D-0405
K & R Mining, Inc. 14695 Lincoln St. SE P.O. Box 365 Minerva, OH 44657 216-868-7754 Dwight A. Ensley, pres.	Foltz (252) Egan (342)	Stark Stark	178,340 23,011	Sk-225 Sk-234	D-0105 D-0555
K.C.C.I. P.O. Box 24 Morristown, OH 43759 614-782-1087 George Krulock, pres.	Coleman Pit (51)	Belmont	8,300	Bt-1130	D-0465
K D Coal Co., Inc. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 Kevin E. Thompson, pres.	Baker Mine (73) Benner Mine (369)	Columbiana Columbiana	34,666 1,674	Ca-343 Ca-945	C-1571, D-0372 IM-958
Kimble Clay & Limestone Co. R.D. 1 Box 386 Dover, OH 44622 216-343-1226 Floyd E. Kimble, owner	Kimble Clay & Limestone (262)	Tuscarawas	107,465	Ts-1727	IM-9, D-0203, D-0413
King Quarries, Inc. 2215 Adamsville Rd. Zanesville, OH 43701 614-453-9961 David King, pres.	King Strip (217) King Strip (224)	Muskingum Muskingum	32,417 7,034	Mum-237 Mum-251	C-1579, D-0269 D-0382
Knowlton Industries 61779 Sampson Rd. Cambridge, OH 43725 614-638-2100 W. B. Knowlton, Jr., partner	Norma Strip (365)	Perry	103	Py-K[9]	D-0170
Kohl Industries Rte. 4 Box 4070 New Philadelphia, OH 44663 216-874-4748 Jerry K. Kohl, owner	Black Hawk (248)	Stark	17,528	Sk-217	IM-750
Kymcoal, Inc. P.O. Box 409 Moxahala, OH 43761 614-342-1809 Manford Merckle, pres.	Kymcoal #1 (128) Kymcoal #2 (378)	Gallia Gallia	34,932 30,112	Ga-246 Ga-247	D-0302

[9]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
L. & M. Coal Co. 60180 Claysville Rd. Cambridge, OH 43725 614-826-4951 David Lagle, owner	L. & M. Coal Co. (134)	Guernsey	14,123	Gy-303	D-0464
L & M Minerals, Inc. P.O. Box 54 Star Rte. Millersburg, OH 44654 216-893-2227 Emanuel E. Mullet, pres.	Evans (264) Romig (276)	Tuscarawas Tuscarawas	15,394 29,032	Ts-1884 Ts-1930	IM-6 IM-6
LaMay Coal Co., Inc. P.O. Box 663 Cambridge, OH 43725 614-439-4481 John Nicolozakes, pres.	Gilmore Pit (175)	Jackson	29,749	Jkn-1054[10]	D-0205, D-0280
LaMay Industries, Inc. Box 965 Jackson, OH 45640 614-286-3752 Keith Bowman, pres.	Gilmore Pit (175)	Jackson	117,331	Jkn-1054[11]	D-0205, D-0280
Lisbon Coal Crushers, Inc. 37544 Hunters Camp Rd. P.O. Box 492 Lisbon, OH 44432 216-424-9559 William T. Lewis, pres.	Ray Papania (92) Baronzzi (318) Sell/Mattevi (373)	Columbiana Columbiana Columbiana	38,498 7,153 18,461	Ca-937 Ca-923 Ca-939	D-0493 D-0446 IM-959
Loase Coal Co. P.O. Box 369 Bethesda, OH 43719 614-484-4287 William E. Loase, owner	Holloway Strip (376)	Belmont	1,421	Bt-1144	D-0571
M & M Builder's Supply 5820 Carbon Hill Rd. East Palestine, OH 44413 216-421-9958 Hugh R. Madden, owner	Madden (316)	Columbiana	1,089	Ca-877	IM-584
M & S Coal Co., Inc. 45542 Cream Ridge Rd. Lisbon, OH 44432 216-385-0304 Christopher L. Potts, pres.	Todd (81) Gaydos (105)	Columbiana Columbiana	24,950 38,935	Ca-863 Ca-MS[12]	C-1289, D-0176, D-0430 D-0238
Mac Mining Co. P.O. Box 218 Carrollton, OH 44615 216-627-5154 James L. Myers & William F. Cattrell, partners	CAM #3 (68) CAM #4 (70)	Carroll Carroll	2,657 32,620	Cl-226 Cl-230	D-0441 D-0495
Mackra Minerals P.O. Box 218 Carrollton, OH 44615 216-739-3341 L. Lee Krabill, pres.	Murray Anthony Mine (191)	Jefferson	23,754	Jfn-790	D-0336
Red Malcuit, Inc. 707 South Wooster Ave. P.O. Box 166 Strasburg, OH 44680-0166 216-878-7114 Mark A. Malcuit, pres.	RMI #1 (269)	Tuscarawas	66,702	Ts-1918	C-1238, D-0236
Mansfield Hawk Mining, Inc. 514 Woodside Ave. North Canton, OH 44720 216-497-2706 Larry J. Hawk & Jerry Mansfield, owners	Birchfield Strip #4 (102) Mansfield Hawk Mining, Inc. (319) Mansfield Hawk Mining, Inc. (245) Mansfield Hawk Mining, Inc. (340)	Columbiana Columbiana Stark Stark	19,156 18,778 6,939 1,106	Ca-931 Ca-933 Sk-201 Sk-232	D-0485 D-0043 D-0020 D-0543
Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 614-695-2197 George Nicolozakes, pres.	Negus-Berry (5) Borovich-Neitzelt-Suter (13) Snedeker-Consol et al. (17) Ayers (18) Barack-Henthorne et al. (38) Seabright-Bigley (39) Evick-Mick (40)	Belmont Belmont Belmont Belmont Belmont Belmont Belmont	3,859 10,844 20,730 2,948 11,834 4,623 5,736	Bt-82 Bt-147M[13] Bt-865 Bt-905[14] Bt-1104 Bt-1105 Bt-1107	C-1352 D-0022 D-0118 C-1301 D-0088 D-0333 D-0064, D-0303

[10]LaMay Coal Co., Inc. operated this mine from January to April 1986. See also LaMay Industries, Inc.
[11]LaMay Industries, Inc. operated this mine from May to December 1986. See also LaMay Coal Co., Inc.
[12]No mine number has been assigned by the Division of Mines.
[13]This mine number has been duplicated for another company.
[14]Marietta Coal Co. operated this mine for the first and second quarters of 1986. See also Ohio Coal & Construction Corp.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Marietta Coal Co. (con't)	Consol (42)	Belmont	31,591	Bt-1109	D-0270
	Sikole-Ludwig-Mayhugh (54)	Belmont	7,006	Bt-1133	D-0521
	Oliver-Clark (58)	Belmont	7,963	Bt-MAR[15]	D-0491
Merco Mining, Inc. P.O. Box 409 Moxahala, OH 43761 614-342-1809 Manford Merckle, pres.	Merco Strip #2 (126)	Gallia	57,594	Ga-240	C-0616
Ted Mesmer & Sons 10950 Woodworth Rd. North Lima, OH 44452 216-549-2385 Robert Mesmer, pres.	V Pts. Mine (204)	Mahoning	13,536	Mg-59	D-0383
Midway Coal, Inc. 8250 Arrow Rd. SW P.O. Box 251 Minerva, OH 44657 216-868-6080 Arnold Spears, pres.	Midway Coal, Inc. (60)	Carroll	2,630	Cl-22	D-0358
Miller Mining, Inc. Rte. 2 Box 254 Sugarcreek, OH 44681 216-852-4012 Raymond O. Miller, pres.	Shoup Mine (163)	Holmes	20,007	Hs-85	D-0234
	Wefler Mine (332)	Holmes	2,167	Hs-89	D-0534
	Raber #5 (333)	Holmes	20,936	Hs-91	D-0567
	Whoobler (284)	Tuscarawas	7,596	Ts-1947	D-0350, D-0415
	Hershberger 3A (343)	Tuscarawas	31,319	Ts-1958	D-0460
	M & M Strip (350)	Tuscarawas	13,452	Ts-1973	D-0584
Milton Mining Co. P.O. Box 548 Jackson, OH 45640 614-682-7787 Keith Bowman, pres.	Greasy #1 (167)	Jackson	132,079	Jkn-548	D-0368
Mudsock Minerals, Inc. P.O. Box 963 New Philadelphia, OH 44663 216-343-2200 Raymond J. Nowak, pres.	Siffy (293)	Tuscarawas	54,736	Ts-1965M[16]	D-0518
Muskingum Mining, Inc. 6422 East Main St. Reynoldsburg, OH 43068 614-866-6505 David L. Jamison, pres.	Muskingum Mine (216)	Muskingum	629,424	Mum-206	C-0461, C-1047, C-1214, D-0007, D-0154, D-0181, D-0235, D-0342
Nacco Mining Co. Central Division 12800 Shaker Blvd. Cleveland, OH 44120 216-752-1000 Otis Bennett, Jr., pres.	Powhatan #6 (3)	Belmont	1,299,710	Bt-68	D-0360
Nutter Bros. Coal Co., Inc. P.O. Box 190 New Lexington, OH 43766 614-391-2681 James P. Nutter, pres.	Nutter Bros. Coal Co., Inc. (2)	Athens	21,441	As-NB[15]	D-0457
Ohio Amco, Inc. P.O. Box 207 Coshocton, OH 43812 614-623-0660 Paul E. Bryant, pres.	Simco (111)	Coshocton	7,503	Cn-794	D-0060
Ohio Coal & Construction Corp. P.O. Box 2388 Wintersville, OH 43952 614-264-7704 Orlando C. Schiappa, owner	No. 38 Strip (6)	Belmont	36,896	Bt-91	D-0448, D-0458
	No. 39 Strip (306)	Belmont	9,039	Bt-780	D-0486
	Ayers (18)	Belmont	10,681	Bt-905[17]	C-1301
	No. 39 Strip (35)	Belmont	106,739	Bt-1101	D-0166
	No. 38 Strip (43)	Belmont	26,457	Bt-1111	D-0256
	No. 38 Strip (48)	Belmont	132,429	Bt-1125	D-0484
	Ayers Limestone (49)	Belmont	39,337	Bt-1126	D-0486
	No. 39 Strip (306)	Belmont	42,424	Bt-1141	D-0486
	No. 31 Strip (370)	Belmont	15,175	Bt-1149	D-0411
	No. 36 Strip (182)	Jefferson	44,303	Jfn-711	D-0009, D-0180
	No. 30 Strip (197)	Jefferson	150,751	Jfn-801	D-0525
	No. 36 (337)	Jefferson	141,798	Jfn-804	D-0564
	No. 38 Medill (382)	Jefferson	14,071	Jfn-1296	D-0525
Ohio Edison Co. 76 S. Main St. Akron, OH 44308 216-384-5100 Justin T. Rogers, Jr., pres.	Ohio Edison Co. Strip Mine (193)	Jefferson	141,533	Jfn-1267	D-0142

[15]No mine number has been assigned by the Division of Mines.
[16]This mine number has been duplicated for another company.
[17]Ohio Coal & Construction Corp. operated this mine for the third and fourth quarters of 1986. See also Marietta Coal Co.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 614-968-3504 Tony Gentile, pres.	Miller Pit (10)	Belmont	47,701	Bt-137	C-1534, D-0338
	Schell Pit (20)	Belmont	717	Bt-957	C-1313, D-0298
	Negus Strip (25)	Belmont	53,940	Bt-992	C-1023, D-0305
	7400 Pit (27)	Belmont	37,716	Bt-1074	C-1451
	Saffell (36)	Belmont	7,975	Bt-1102	D-0340
	Ingold (335)	Jefferson	15,242	Jfn-799	D-0497
Oxford Minerals, Inc. 839 Second St. SW Suite B New Philadelphia, OH 44663 216-339-6589 John C. Jensen, pres.	Milliken Mine (374)	Coshocton	2,455	Cn-817	D-0600
P & J Mining Co. 3130 Belmont Ave. P.O. Box 2228 Youngstown, OH 44504 216-759-9317 Daniel J. O'Horo, pres.	P & J Mining Co. (101)	Columbiana	1,493	Ca-926	D-0227
Peabody Coal Co. Eastern Division 1951 Barrett Ct. P.O. Box 1981 Henderson, KY 42420 502-827-0800 Howard W. Williams, pres.	Sunnyhill #9 South (235)	Perry	908,411	Py-265	D-0324
	Sunnyhill #9 North (236)	Perry	841,411	Py-271	D-0326
Plate Coal Co. 17900 State Rte. 45 Wellsville, OH 43968 216-532-2814 Leonard Plate, Sr., owner	Plate #2 (75)	Columbiana	5,732	Ca-714	
Puskarich Limestone Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Puskarich Limestone (62)	Carroll	43,795	Cl-183	IM-7
Puskarich Mining, Inc. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	New Cumberland (268)	Tuscarawas	56,294	Ts-1917	C-1132
Quality Coal Co. Rte. 1 Cheshire, OH 45620 614-992-5639 Jay Hall, Jr., owner	Wharton Strip (159)	Hocking	22,414	Hg-313	D-0145, D-0278
	Broken Arrow (174)	Jackson	126,192	Jkn-584	D-0427
	Buckeye Furnace (379)	Jackson	23,241	Jkn-1061	D-0627
	Church (359)	Vinton	29,318	Vn-181	D-0219
	Sentry (301)	Vinton	249,905	Vn-655	D-0004, D-0219
Quarto Mining Co. 12800 Shaker Blvd. Cleveland, OH 44120 216-752-1000 Robert E. Murray, pres.	Powhatan #4 (215)	Monroe	3,571,638	Me-4	D-0422, D-0433
R & E Coal Co. 8693 Bender St. Navarre, OH 44662 216-879-5864 Rafael Colucy, owner	R & E Coal Co. (275)	Tuscarawas	10,806	Ts-1925	D-0093
R & F Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Cain-Gregg (8)	Belmont	49,652	Bt-127	D-0047
	Newlin-Sproul (14)	Belmont	221,538	Bt-149	D-0053
	Hollingsworth (15)	Belmont	27,350	Bt-153	D-0081
	Phillips (24)	Belmont	247,233	Bt-984	D-0263
	Loy-McFarland (30)	Belmont	46,617	Bt-1095	D-0096
	Collins (31)	Belmont	155,150	Bt-1097	D-0143
	Shephard (37)	Belmont	52,451	Bt-1103	D-0312
	Cheslock (44)	Belmont	2,135	Bt-1112	D-0296
	Smith-Briggs (45)	Belmont	35,023	Bt-1116	D-0423
	Burson (46)	Belmont	191,746	Bt-1117	D-0263
	Wharton-Cross (56)	Belmont	118,260	Bt-1137	D-0450
	MacMillan-Shephard (308)	Belmont	117,682	Bt-1139	D-0452
	Ferguson-Fowkes (310)	Belmont	72,947	Bt-1146	D-0561
	Yoe-Kemp (312)	Belmont	43,887	Bt-1148	D-0553
	Egypt Valley East (313)	Belmont	59,435	Bt-EV[18]	D-0510
	Polen (57)	Belmont	71,275	Bt-P[18]	D-0500
	Watson-Huhn (314)	Belmont	35,927	Bt-W[18]	D-0262
	Courtwright (124)	Coshocton	100,649	Cn-768	D-0208
	Bartolec (123)	Coshocton	61,956	Cn-779	D-0320
	Roahrig (115)	Coshocton	94,782	Cn-803	D-0253
	Frye (117)	Coshocton	56,065	Cn-807	D-0370
	Ross-Isletta (120)	Coshocton	158,994	Cn-811	D-0467
	Adams-Hamilton (121)	Coshocton	222,585	Cn-812	D-0466

[18]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
R & F Coal Co. (con't)	Wentz-Green (122)	Coshocton	90,873	Cn-814	D-0489
	Hart (130)	Guernsey, Tuscarawas	141,085	Gy-300	D-0177
	Strauss (140)	Harrison	55,759	Hn-207	D-0186
	Croskey (145)	Harrison	91,860	Hn-216	D-0386
	Lamborn (147)	Harrison	27,165	Hn-218	D-0436
	Anderson (325)	Harrison	156,114	Hn-221	D-0527
	Reppart (327)	Harrison	38,598	Hn-223	D-0552
	Rinks (156)	Harrison	66,767	Hn-224	D-0416
	Mihelios-Pruneski (153)	Harrison	164,054	Hn-739	D-0119
	Penova-Meyers (154)	Harrison	31,932	Hn-746	D-0073
	Matusik (155)	Harrison	274,615	Hn-M[18]	D-0470
	Varkony-Kross-Polen (183)	Jefferson	172,555	Jfn-720	C-1546, D-0158
	Cochran-Swad (336)	Jefferson	38,093	Jfn-802	D-0500
	Puskarich (201)	Jefferson	6,853	Jfn-P[18]	D-0158
	Flood-Cline (234)	Noble	60,295	Ne-FC[18]	D-0453
	Gibson (232)	Noble	1,981	Ne-G[18]	D-0114
	Allgyer-Schupp (282)	Tuscarawas	34,454	Ts-1945	D-0300
	Tusco-Mills (348)	Tuscarawas	24,128	Ts-1971	D-0568
	Furbay-Beem (352)	Tuscarawas	9,948	Ts-1978	D-0582
	Regula (375)	Tuscarawas	1,551	Ts-R[18]	D-0612
R & R Minerals, Inc. T.R. 319 7360 Skyview Rd. Millersburg, OH 44654 216-674-4926 Gary R. Ross, pres.	R & R Minerals, Inc. (119)	Coshocton	10,763	Cn-808	D-0403
R & S Coal Co., Inc. Rte. 1 Box 229 Hamden, OH 45634 614-384-5282 Roger Eberts, pres.	R & S Strip (295)	Vinton	22,715	Vn-173	D-0197
R. V. G., Inc. P.O. Box 250 Byesville, OH 43723 614-439-2233 James Rossiter, pres.	R. V. G. #4 (132)	Guernsey	45,771	Gy-301R[19]	D-0346
	R. V. G. #5 (323)	Guernsey	49,600	Gy-305	D-0578
Regal Mining, Inc. 1270 Trenton Ave. Ext. Uhrichsville, OH 44683 216-739-3341 Ronald Selway, pres.	Blum-Noble (64)	Carroll	5,907	Cl-216	D-0150
	WWH (69)	Carroll	31,697	Cl-227	D-0454
	Camp Ecco (360)	Carroll	134	Cl-233	D-0628
Robinson & Sons Mining 35667 State Rte. 30 Lisbon, OH 44432 216-424-7489 Danny L. Robinson, owner	Robinson Mine (97)	Columbiana	2,331	Ca-918	D-0395
Royal Oak Industries, Inc. P.O. Box 626 Jackson, OH 45640-0626 614-682-7787 Phil A. Bowman, pres.	Liberty (166)	Jackson	17,242	Jkn-530	D-0003
	Liberty Mine (177)	Jackson	134,397	Jkn-1059	D-0494
S. & D. Construction Corp. Rte. 1 Toronto, OH 43964 614-544-5616 M. J. Rankin, pres.	Rankin Mine #4 (196)	Jefferson	68,068	Jfn-797	D-0469
SME Bessemer Cement, Inc. P.O. Box 5250 Poland, OH 44514 216-499-9100 Michael C. Miller, pres.	Budry (207)	Mahoning	6,313	Mg-608	IM-4
Saginaw Mining Co. 1100 Superior Ave. P.O. Box 6508 Cleveland, OH 44114-2598 216-861-3300 Renold D. Thompson, pres.	Saginaw Mine (16)	Belmont	456,658	Bt-643	D-0328
Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Hoffman, pres.	Sands Hill Strip #2 (176)	Jackson	130,624	Jkn-1055	D-0347
	Sands Hill Strip (299)	Vinton	161,496	Vn-641	C-1088, D-0309
Sands Mining Corp. 3445 Adamsville Rd. Zanesville, OH 43701 614-454-1483 Gene Sands, pres.	Sands Mining Corp. (218)	Muskingum	53,197	Mum-239	D-0089, D-0281

[18]No mine number has been assigned by the Division of Mines.
[19]This mine number has been duplicated for another company.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Schiappa Coal Co., Inc. P.O. Box 728 Steubenville, OH 43952 614-282-5301 Teresa C. Schiappa, pres.	No. 43 Strip (179) Smith (195)	Jefferson Jefferson	129,919 20,919	Jfn-673 Jfn-795	C-0651, C-1029, D-0188 D-0487
Schlabach Coal Co. P.O. Box 65 Baltic, OH 43804 216-897-5422 Alvin A. Schlabach, owner	Schlabach-Noble (109)	Coshocton	5,639	Cn-776	C-0999, D-0517
Seamco, Inc. P.O. Box 430 Moxahala, OH 43761 614-342-1120 E. Arthur Stewart, pres.	Merco Mining, Inc. (338)	Perry	13,307	Py-316	D-0310
Shawnee Coal Co. P.O. Box 869 Zanesville, OH 43701 614-454-2583 James F. Graham, pres.	Shawnee Coal Co. (242) Shawnee Coal Co. (243)	Perry Perry	21,874 26,139	Py-323 Py-326	D-0275 D-0318
Simco-Peabody 1951 Barrett Ct. Henderson, KY 42420 614-623-0660 Howard W. Williams, pres.	Simco-Peabody (112)	Coshocton	707,008	Cn-799	D-0023, D-0060
Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 614-286-5051 J. E. Katlic, pres.	Meigs Mine #1 (212) Meigs Mine #2 (213) Raccoon Mine #3 (300)	Meigs Meigs Vinton	1,075,882 2,701,610 1,070,043	Ms-293 Ms-294 Vn-652	D-0354 D-0355 D-0463
Star Mining Co., Inc. 3549 Marietta Rd. SE Junction City, OH 43748-9743 614-342-1440 Bruce Schwartz, pres.	Howdyshell (241) Adcock (364)	Perry Perry	22,792 20,513	Py-321 Py-S[20]	D-0365 D-0615
Stewart Coal Co. Lake Alma Rd. Wellston, OH 45692 614-286-4696 William F. Stewart, owner	Stewart Mine (172)	Jackson	58,429	Jkn-578	D-0239
Stewart Construction Co. 289 Frank Smith Rd. Wellston, OH 45692 614-384-2646 Walter E. Stewart, owner	Bush Mine (334)	Jackson	6,153	Jkn-574	D-0574
Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 216-852-4440 Daniel O. Miller, gen. mgr.	Sugarcreek Clay & Limestone (367)	Tuscarawas	5,780	Ts-1928	IM-98
T.P. Mining, Inc. 46938 Almar Circle St. Clairsville, OH 43950 614-269-9219 Thomas Petrozzi, pres.	Monroe Strip (143)	Harrison	56,331	Hn-210	D-0277
Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 J. E. Thompson, pres.	Peres Mine (205)	Mahoning	68,700	Mg-65	C-0990, D-0374
Thompson Mining Co. R.D. 1 182 Glass Ave. Byesville, OH 43723 614-685-6726 George Thompson, owner	Jacobs Property (133)	Guernsey	3,817	Gy-301T[21]	D-0438
Transpacific Technology of Ohio P.O. Box 1749 S. Zanesville, OH 43702-0610 614-342-1915 Michael Clay, pres.	Rehoboth Reclamation Project (368)	Perry	7,658	Py-332	D-0610

[20]No mine number has been assigned by the Division of Mines.
[21]This mine number has been duplicated for another company.

1986 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1986 production (tons)	State mine number	Division of Reclamation permit number
Valley Coal Co. P.O. Box 148 Union Furnace, OH 43158 614-385-8521 William F. Zuspan, pres.	Coonville (157) Darmac (158) Sam's Pit (331)	Hocking Hocking Hocking	1,164 55,908 42,005	Hg-284 Hg-295 Hg-V[22]	C-1433 C-1460 D-0519
Valley Mining, Inc. Rte. 1 Box 158B Dennison, OH 44621 614-922-3942 Kenneth E. Brown, pres.	Goose Run-Perrin Run (187) Putnam (288) S & C Development (354)	Jefferson Tuscarawas Tuscarawas	185,078 31,740 793	Jfn-785 Ts-1957 Ts-V[22]	D-0090, D-0473 D-0474 D-0604
Varkony Mining R.D. 5 Cadiz, OH 43907 614-937-2777 Stephen Varkony, owner	Varkony Mining (146)	Harrison	42,053	Hn-217	D-0440
Vic Mining, Inc. Rte. 1 Box 355A Dover, OH 44622 216-343-1041 Victoria J. Lahmers, pres.	Newport Pit Strip (377)	Tuscarawas	6,596	Ts-1965V[23]	D-0569
Dallas Vickers R.D. 2 Jewett, OH 43986 614-945-0281 Dallas Vickers, owner	Vickers Mine (324)	Harrison	3,244	Hn-214	D-0259
W.B. Coal Co. R.D. 1 Box 40 Bloomingdale, OH 43910 614-282-6503 Wayne Boich, owner	Ann Strip 1A (144) Ann Strip (149)	Harrison Harrison	151,201 64,934	Hn-211 Hn-694	D-0376 D-0135
Walton Coal Co., Inc. 1500 Mulga Rd. Wellston, OH 45692 614-384-3787 Earl Walton, owner	Walton Coal Co., Inc. (168)	Jackson	9,963	Jkn-558	D-0037
Waterloo Coal Co. P.O. Box 177 Oak Hill, OH 45656 614-682-7787 Harold Bowman, pres.	Bowman Strip (165)	Jackson	439,403	Jkn-367	IM-774, D-0163, D-0273, D-0286
Weirton Construction Co. 401 Pennsylvania Ave. Weirton, WV 26062 304-748-1400 Donald R. Donell, pres.	#19 (180)	Jefferson	169,272	Jfn-687	C-1105, D-0404
Wilmot Mining Co. P.O. Box 185 Wilmot, OH 44689 216-359-5411 Thomas R. Eddy, pres.	Wilmot Mining Co. (341)	Stark	33,017	Sk-233	D-0432
Y & O Coal Co. P.O. Box 1000 St. Clairsville, OH 43950 614-695-4117 Jack Schomaker, pres.	Nelms #2 (136)	Harrison	663,095	Hn-169	D-0424
Zimnox Coal Co. 1211 Third St. Brilliant, OH 43913 614-598-4111 Walter Zimnox, pres.	Zimnox #4 (181)	Jefferson	57,773	Jfn-703	D-0112, D-0194
Zoar Mining Co. P.O. Box 550 Zoar, OH 44697 216-874-2434 John Hothem, pres.	Zoar Mining Co. (257) Zoar Mining Co. (258)	Tuscarawas Tuscarawas	959 2,734	Ts-538 Ts-540	IM-27 IM-28

[22]No mine number has been assigned by the Division of Mines.
[23]This mine number has been duplicated for another company.

1986 OHIO DIRECTORY OF REPORTING COAL-WASHING PLANTS AND ASSOCIATED FACILITIES, BY COUNTY

County	Name, address, telephone number, and president/owner/manager of company	Name of plant	Township	State mine number	Type of facility
Belmont	Bannock Coal Co. 43249 Harrah St. P.O. Box 98 Lafferty, OH 43951 614-968-3582 Tony Gentile, pres.	Bannock Coal Co. Shops		Bt-1127	shops
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Bellaire River Dock Lynn Tipple Holloway Tipple #1 #3 Tipple	Pultney Washington Flushing Flushing	Bt-876 Bt-878 Bt-963 Bt-965	dock prep plant—jig, flotation tipple tipple
	Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 614-695-2197 George Nicolozakes, pres.	Loading Dock	Pultney	Bt-936	loading dock, prep plant—jig, flotation, centrifugal dryer, crushers, screens
	Nacco Mining Co. Central Division 12800 Shaker Blvd. Cleveland, OH 44120 216-752-1000 Otis Bennett, Jr., pres.	Powhatan #6	Washington	Bt-68	prep plant—jigs, cyclones, centrifuges, thickeners, filters, screens
	North Amerian Coal Corp. 12800 Shaker Blvd. Cleveland, OH 44120 216-752-1000 Otis Bennett, Jr., pres.	Central Shop	York	Bt-1000	central shop
	Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 614-968-3504 Tony Gentile, pres.	Amber Tipple Lafferty Tipple Lafferty Truck Shop	Union Union Union	Bt-844 Bt-947 Bt-1093	tipple tipple shop
	R & F Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Lamira Preparation Plant Bellaire River Terminal Rebuild Center	Smith City of Bellaire	Bt-108 Bt-832 Bt-1110	prep plant—heavy-media washers, cyclone, centrifuges, thickeners, filters, crushers, breakers, screens dock shop
	Saginaw Mining Co. 1100 Superior Ave. P.O. Box 6508 Cleveland, OH 44114-2598 216-861-3300 Renold D. Thompson, pres.	Saginaw Mine	Richland	Bt-643	prep plant—heavy-media washers, crushers, screens, picking tables, magnets
Columbiana	C & E Coal, Inc. R.D. 2 Box 177 Toronto, OH 43964 614-537-1498 Amos L. Rawson, pres.	C & E Coal, Inc.	Madison	Ca-892	prep plant—crushers, screens
	Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 216-337-9511 John C. Grisham, pres.	Kensington Prep Plant	West	Ca-879	prep plant—heavy-media washer, cyclone, centrifuges, breaker
Coshocton	Conesville Preparation Co. Box 222 Conesville, OH 43811 614-892-2392 J. E. Katlic, pres.	Conesville Preparation Co.	Franklin	Cn-810	prep plant—jig, cyclones, froth cells, flotation, filter press, screens, dryers
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Lori Tipple	Franklin	Cn-736	tipple
	R & F Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Barb Tipple	Franklin	Cn-748	tipple
	Schlabach Coal Co. P.O. Box 65 Baltic, OH 43804 216-897-5422 Alvin A. Schlabach, owner	Bedford Tipple	Crawford	Cn-776	tipple

1986 OHIO DIRECTORY OF REPORTING COAL-WASHING PLANTS AND ASSOCIATED FACILITIES, BY COUNTY—Continued

County	Name, address, telephone number, and president/owner/manager of company	Name of plant	Township	State mine number	Type of facility
Gallia	Conrich of Ohio, Inc. P.O. Box 59 Addison, OH 45610 614-446-7040 Lee Congleton, pres.	Conrich of Ohio, Inc.	Addison	Ga-216	loading dock
	Crown City Mining, Inc. 6422 E. Main St. Reynoldsburg, OH 43068 614-286-6505 David L. Jamison, pres.	Crown City Mine	Guyan	Ga-220	prep plant—jig, cyclones, crusher, breaker, screens, dryers
	LaMay Industries, Inc. P.O. Box 965 Jackson, OH 45640 614-286-3752 Keith Bowman, pres.	LaMay River Dock	Addison	Ga-229	dock, tipple
	Mack Energy Co. P.O. Box 148 Union Furnace, OH 43158-0148 614-385-8521 Michael McCort, pres.	Mack Energy River Tipple		Ga-236	dock, tipple
	Zinn Coal Co., Inc. R.D. 1 Box 176 Kanauga, OH 45631 614-446-1408 Ralph Zinn, owner	Zinn Coal Co., Inc.		Ga-183	tipple
Harrison	Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-942-4641 Ben Statler, v. pres.	General Services #105 Georgetown Prep Plant Shovel Maintenance #104	Short Creek Cadiz Short Creek	Hn-5 Hn-212 Hn-618	general services prep plant—jigs, flotation, cyclones, centrifuges, filters, crushers, breaker, screens, dryer, picking tables, magnets maintenance
	R & F Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Nitrate Plant Machine Shop/Warehouse	Short Creek Cadiz	Hn-680 Hn-709	nitrate plant shop
Hocking	Nutter Bros. Coal Co., Inc. P.O. Box 190 New Lexington, OH 43766 614-391-2681 James P. Nutter, pres.	#1 Tipple	Washington	Hg-293	tipple
Jackson	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Hoffman, pres.	Sands Hill Strip #2	Milton	Jkn-1055	prep plant—heavy-media cyclone, hydrocyclones, screens, dryer, crusher, picking table, magnets
	Waterloo Coal Co. P.O. Box 177 Oak Hill, OH 45656 614-682-7787 Harold Bowman, pres.	Bowman Strip	Bloomfield, Madison	Jkn-367	prep plant—jig, crushers, breaker, screens, dryers, wash tables
Jefferson	C & E Coal, Inc. R.D. 2 Box 177 Toronto, OH 43964 614-537-1498 Amos L. Rawson, pres.	C & E #2	Smithfield	Jfn-798	prep plant—jig, screen, flotation
	Ohio Coal & Construction Corp. P.O. Box 2388 Wintersville, OH 43952 614-264-7704 Orlando C. Schiappa, owner	#40 Dock-Shop-Washer	Warren	Jfn-647	dock, shop, prep plant—heavy-media washer, cyclones, crushers, breaker, screens, dryers
	Route Forty-Three Washer P.O. Box 407 Richmond, OH 43944 614-282-5301 Paul Carapellotti, pres.	Route Forty-Three Washer	Springfield	Jfn-1290	prep plant—heavy-media washer
	W.B. Coal Co. R.D. 1 Box 40 Bloomingdale, OH 43910 614-282-6503 Wayne Boich, owner	Ann Tipple	Wayne	Jfn-744	tipple
Lawrence	Collins Mining Co. Rte. 2 Box 48 Ironton, OH 45638 614-532-9414 O. C. Collins, owner	River Dock	Hamilton	Le-415	dock

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1986 OHIO DIRECTORY OF REPORTING COAL-WASHING PLANTS AND ASSOCIATED FACILITIES, BY COUNTY—Continued

County	Name, address, telephone number, and president/owner/manager of company	Name of plant	Township	State mine number	Type of facility
Lawrence (con't)	Harbour Marine, Inc. P.O. Box 3126 Huntington, WV 25702-0126 614-886-8444 James W. McGlothlin, pres.	Harbour Marine, Inc.		Le-420	tipple
	Ironton Coal Co. 3400 S. Third St. Ironton, OH 45638 614-532-5322 Larry Addington, pres.	Ironton Coal Co.	Upper	Le-439	loading dock
	Rail River Terminal P.O. Box 101 101 Dayton Lane Ironton, OH 45638 614-532-6100 Gregory K. Collier, supt.	Rail River Terminal	Perry	Le-413	dock
Mahoning	East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-549-2165 R. E. Mackall, pres.	Tipple Washing Plant	Beaver Beaver	Mg-621 Mg-623	tipple prep plant—cyclones, centrifuges, thickener, filter, crushers, screens, magnets
	Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 J. E. Thompson, pres.	Tipple	Springfield	Mg-588	tipple
Meigs	Raven Hocking Coal Corp. P.O. Box 108 Mason, WV 25260 304-773-5750 William F. Zuspan, pres.	Raven Dock	Sutton	Ms-307	dock
	Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 614-286-5051 J. E. Katlic, pres.	Meigs Mine No. 1	Salem	Ms-293	prep plant—heavy-media washers, flotation, cyclones, centrifuges, thickeners, filters, breaker, screens
Monroe	Quarto Mining Co. 12800 Shaker Blvd. Cleveland, OH 44120 216-752-1000 Robert E. Murray, pres.	Powhatan #4	Salem	Me-4	prep plant—jigs, cyclones, centrifuges, thickeners, filters, crushers
Muskingum	King Quarries, Inc. 2215 Adamsville Rd. Zanesville, OH 43701 614-453-9961 David King, pres.	King Quarries Tipple	Washington	Mum-229	tipple
Noble	Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 J. E. Katlic, pres.	Muskingum Mine	Brookfield	Ne-41	prep plant—jigs, flotation, cyclones, thickener, filters, crushers, breakers, screens, magnets
Perry	Peabody Coal Co. 2644 Pike Twp. Rd. 217 NE New Lexington, OH 43764 502-827-0800 Howard W. Williams, pres.	Sunnyhill Preparation Plant #0297	Pike	Py-248	prep plant—jigs, cyclones, crushers, breaker, screens, centrifuges
Scioto	Ky-Oh Transportation Co. P.O. Box 214 Wheelersburg, OH 45694 606-932-3101 C. N. Gilmore, pres.	Ky-Oh Transportation Co.	Porter	So-96	dock
Tuscarawas	Central Fuel Co. P.O. Box 165 New Philadelphia, OH 44663 216-339-5049 Keith B. Kimble, gen. mgr.	Central Fuel Co. Prep Plant	York	Ts-1938	prep plant—jig, screen, dryers
	Empire Coal Co. P.O. Box 729 Gnadenhutten, OH 44629 614-254-4395 Bruce V. Work, pres.	Empire Coal Co.	Clay	Ts-115	prep plant—jig, flotation, cyclones, filters, crushers, screens

1986 OHIO DIRECTORY OF REPORTING COAL-WASHING PLANTS AND ASSOCIATED FACILITIES, BY COUNTY—Continued

County	Name, address, telephone number, and president/owner/manager of company	Name of plant	Township	State mine number	Type of facility
Tuscarawas (con't)	GEX Hardy, Inc. P.O. Box 340 Sugarcreek, OH 44681 216-852-2431 J. J. Blazer, pres.	Barrs Mills Tipple	Sugar Creek	Ts-1601	tipple
	Horizon Coal Corp. P.O. Box 618 Beach City, OH 44608 216-756-2414 Emanuel E. Mullet, pres.	Horizon Coal Wash Plant	Lawrence	Ts-1942	prep plant—jigs, cyclones, centrifuges, crushers, screens, picking tables
Vinton	Benedict, Inc. P.O. Box 315 McArthur, OH 45651 614-596-5226 W. E. Engle, pres.	Benedict, Inc.	Swan	Vn-145	prep plant—heavy-media washer, cyclone, crusher, conveyors
	Jaymar Coal Prep, Inc. Rte. 1 Cheshire, OH 45620 614-992-6637 Jay Hall, Jr., owner	Jaymar Prep Plant	Clinton	Vn-178	prep plant—washers, cyclones, jig, centrifugal dryer, thickener, Diester table, screens, filter, crusher, magnet
	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Hoffman, pres.	Sands Hill Strip	Clinton	Vn-641	prep plant—heavy-media washers, flotation, cyclones, centrifuge, crushers, screens, dryer, picking tables, magnets
	Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 614-286-5051 J. E. Katlic, pres.	Raccoon Mine No. 3	Wilkesville	Vn-652	prep plant—heavy-media washer, jig, flotation, cyclones, centrifuges, thickeners, filters, crusher, breaker, screens, magnet

Coal-loading tipple on Ohio River in Belmont County, 1950's

1986 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY

NOTE: This directory lists only the coal-producing operations. It does not list tipples, loading docks, preparation plants, or other active, nonproducing operations that would contribute to employment and wage statistics presented on p. 16-18. Information shown is as reported by operators.

SEAM IDENTIFICATION

1	Sharon	4A	Clarion	7A	Mahoning	12	Washington
2	Quakertown	5	Lower Kittanning	8	Pittsburgh	H	Harlem
3	Lower Mercer	5A	Strasburg	8A	Pomeroy-Redstone	Wl	Wilgus
3A	Upper Mercer	6	Middle Kittanning	9	Meigs Creek	W	Winters
3B	Tionesta	6A	Lower Freeport	10	Uniontown		
4	Brookville	7	Upper Freeport	11	Waynesburg		

Name of operator	Name of mine	Township	Seam	Thickness (inches)	Type of mine	Method of production	Tonnage produced in 1986	Days in operation in 1986	Disposition		Employment			State mine number
									Method	Tonnage	Production: Underground	Production: Surface	Non-production	
ATHENS COUNTY — Total production = 31,489 tons														
B & C Coal, Inc.	Ginsburg Mine	Alexander	8	40	surface	strip	10,048	255	truck	10,048		3	5	As-591
Nutter Bros. Coal Co., Inc.	Nutter Bros. Coal Co., Inc.	Trimble	7	24	surface	strip	21,441	257	truck	21,441		3		As-NB[1]
BELMONT COUNTY — Total production = 5,190,242 tons														
Bannock Coal Co.	Michelena	Wheeling	9	42	surface	strip	144,455	80	truck	144,455		28		Bt-133
	Uniontown	Wheeling	9	40	surface	strip	32,054	22	truck	32,054		2		Bt-1136
	Shippy	Wheeling	9	40	surface	strip	124,122	79	rail	103,877		30		Bt-1147
									truck	20,245				
									Total	124,122				
Consolidation Coal Co.	Franklin #125	Flushing	8	62	shaft	longwall	22,746	21	truck	27,663	15		4	Hn-203[2]
						cont. miner	4,917							
						Total	27,663							
Cravat Coal Co.	Malcuit-2400 #1	Flushing	8	40	surface	strip	24,813	22	rail	11,902		3		Bt-146
						auger	3,345		water	825				
						Total	28,158		truck	15,431				
									Total	28,158				
	Hendrysburg	Kirkwood	8		surface	strip	3,862	22	rail	3,288		[3]		Bt-147C[4]
									truck	574				
									Total	3,862				
	Hendrysburg West	Kirkwood	8		surface	strip	200,240	263	rail	124,476		22		Bt-1131
						auger	3,762		water	55,853				
						Total	204,002		truck	23,673				
									Total	204,002				
	Krulock	Richland	8		surface	strip	15,618	23	rail	14,207		1	1	Bt-998
									water	1,411				
									Total	15,618				
	Malcuit-Ward-Bailey	Warren	8		surface	strip	33,503	189	rail	26,782		6		Bt-1118
									truck	6,721				
									Total	33,503				
	Barnesville-Temple	Warren	8		surface	strip	124,283	162	rail	93,020		12		Bt-1143
						auger	39,957		water	30,439				
						Total	164,240		truck	40,781				
									Total	164,240				
	Kriechbaum	York	8		surface	strip	12,852	97	rail	3,135		3		Bt-78
									water	8,743				
									truck	974				
									Total	12,852				

Fairpoint Coal Co.	Mel-Worth	Richland	8 9	36 42	surface	strip	7,519	23	water truck Total	5,129 2,390 7,519		4	7	Bt-927
GEX Hardy, Inc.	Flushing	Flushing, Union	9	36	surface	strip	305,918	308	rail water truck Total	167,685 69,090 68,812 305,587		34	17	Bt-1099
J & W Mining Co.	J & W Mining Co.	Mead	12	42	surface	strip	666		truck	666				Bt-1134
Joyce Coal Co.	Crescent	Colerain	8, 9		surface	strip	96,853	173	truck	96,853		11		Bt-980
K.C.C.I.	Coleman Pit	Wheeling	9	40	surface	strip	8,300	11	truck	8,300		2	1	Bt-1130
Loase Coal Co.	Holloway Strip	Kirkwood	8	48	surface	strip	1,421	20	truck	1,421		1		Bt-1144
Marietta Coal Co.	Negus-Berry	Colerain, Pease	12	27	surface	strip	3,859	7	truck	3,859		4	5	Bt-82[5]
	Seabright-Bigley	Colerain	11	30	surface	strip	4,623	5	truck	4,623				Bt-1105
	Sikole-Ludwig-Mayhugh	Colerain	11	50	surface	strip	7,006	12	truck	7,006				Bt-1133
	Ayers	Pease	12	58	surface	strip	2,948	135	truck	2,948				Bt-905[6]
	Oliver-Clark	Richland	11	33	surface	strip	7,963	15	truck	7,963				Bt-MAR[1]
	Snedeker-Consol et al.	Richland, Smith	11	36	surface	strip auger Total	15,808 4,922 20,730	26	truck	20,730				Bt-865
	Barack-Henthorne et al.	Richland	11	36	surface	strip auger Total	10,762 1,072 11,834	15	truck	11,834				Bt-1104
	Evick-Mick	Richland	11	45	surface	strip	5,736	7	truck	5,736				Bt-1107
	Borovich-Neitzelt-Suter	Smith	11	40	surface	strip auger Total	10,021 823 10,844	19	truck	10,844				Bt-147M[4]
	Consol	Union	8	51	surface	strip auger Total	26,879 4,712 31,591	31	truck	31,591				Bt-1109
Nacco Mining Co.	Powhatan #6	Washington	8	62	slope	cont. miner	1,299,710	242	rail truck other Total	1,204,251 135,019 4 1,339,274	224		96	Bt-68
Ohio Coal & Construction Corp.	No. 38 Strip	Pease	11 12	36 60	surface	strip	36,896	141	truck	36,896		4	2	Bt-91
	No. 39 Strip	Pease	12	60	surface	strip	9,039	66	truck	9,039			1	Bt-780
	Ayers	Pease	12	40	surface	strip	10,681	135	truck	10,681		1	1	Bt-905[7]
	No. 39 Strip	Pease	12	40	surface	strip	106,739	263	truck	106,739		9	2	Bt-1101
	Ayers Limestone	Pease	12	40	surface	strip	39,337	110	truck	39,337		1		Bt-1126
	No. 39 Strip	Pease	12	40	surface	strip	42,424	132	truck	42,424		4	3	Bt-1141
	No. 38 Strip	Richland	11	36	surface	strip	26,457	263	truck	26,457		3	3	Bt-1111
	No. 38 Strip	Richland	10 11	22 36	surface	strip	132,429	263	truck	132,429		25	5	Bt-1125
	No. 31 Strip	Richland	9 12	36 40	surface	strip	15,175	66	truck	15,175		2	3	Bt-1149
Ohio River Collieries, Inc.	Negus Strip	Colerain	12	48	surface	strip	53,940	140	truck	53,942		5	1	Bt-992
	Miller Pit	Union	9	36	surface	strip auger Total	41,516 6,185 47,701	167	truck	47,701		6	1	Bt-137
	Schell Pit	Union	11	28	surface	strip	717	4	truck	717		[3]	1	Bt-957
	7400 Pit	Union	9	42	surface	strip auger Total	35,254 2,462 37,716	168	truck	37,716		6	1	Bt-1074
	Saffell	Union	11	32	surface	strip	7,975	21	truck	7,975		1	1	Bt-1102

[1]No mine number has been assigned by the Division of Mines.
[2]See also Harrison County.
[3]Averages fewer than one employee per month.
[4]This mine number has been duplicated for another company.
[5]Employment reported for Bt-82 is a summary of employment for all Marietta Coal Co. operations.
[6]Marietta Coal Co. operated this mine for the first and second quarters of 1986. See also Ohio Coal & Construction Corp.
[7]Ohio Coal & Construction Corp. operated this mine for the third and fourth quarters of 1986. See also Marietta Coal Co.

1986 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of operator	Name of mine	Township	Seam	Thickness (inches)	Type of mine	Method of production	Tonnage produced in 1986	Days in operation in 1986	Disposition		Employment			State mine number
									Method	Tonnage	Production		Non-production	
											Underground	Surface		
BELMONT COUNTY (continued)														
R & F Coal Co.	Polen	Colerain	11		surface	strip	71,275	147	water	67,194		8	5	Bt-P[8]
	Cain-Gregg	Goshen	11	28	surface	strip	43,941	190	water	46,826		6	3	Bt-127
			12	30		auger	5,711							
						Total	49,652							
	Hollingsworth	Goshen	11	30	surface	strip	24,351	192	water	26,949		4	2	Bt-153
			12	26		auger	2,999							
						Total	27,350							
	Collins	Goshen	11	24	surface	strip	135,286	254	water	152,352		20	7	Bt-1097
						auger	19,864							
						Total	155,150							
	Shephard	Goshen, Smith	11	26	surface	strip	52,451	105	water	49,705		6	5	Bt-1103
	Wharton-Cross	Goshen	11	26	surface	strip	104,677	254	water	115,436		15	5	Bt-1137
						auger	13,583							
						Total	118,260							
	Yoe-Kemp	Goshen	11	28	surface	strip	37,245	170	water	45,455		7	3	Bt-1148
						auger	6,642							
						Total	43,887							
	Phillips	Kirkwood, Warren	9	20	surface	strip	241,296	190	water	227,615		29	21	Bt-984
			11	24		auger	5,937		truck	7,413				
						Total	247,233		Total	235,028				
	Cheslock	Kirkwood	9	40	surface	strip	2,135	22	water	2,140		[9]	[9]	Bt-1112
	Newlin-Sproul	Richland	11	42	surface	strip	195,615	254	water	218,087		28	11	Bt-149
			12	40		auger	25,923							
						Total	221,538							
	Loy-McFarland	Richland	11	36	surface	strip	46,617	149	water	39,121		5	2	Bt-1095
									truck	5,518				
									Total	44,639				
	Ferguson-Fowkes	Richland	11	40	surface	strip	64,331	106	water	76,282		10	3	Bt-1146
			12	30		auger	8,616							
						Total	72,947							
	Smith-Briggs	Somerset	9	45	surface	strip	32,679	126	water	33,666		4	3	Bt-1116
			11	24		auger	2,344							
						Total	35,023							
	Burson	Warren	9	45	surface	strip	191,746	254	water	187,775		25	7	Bt-1117
			11	30					truck	10,533				
									Total	198,308				
	Egypt Valley East	Warren	9	42	surface	strip	59,435	149	water	57,005		8	2	Bt-EV[8]
									truck	4,387				
									Total	61,392				
	Watson-Huhn	Warren	8		surface	strip	29,656	109	water	38,257		5	2	Bt-W[8]
						auger	6,271							
						Total	35,927							
	MacMillan-Shephard	Wheeling	11	24	surface	strip	117,682	170	water	118,516		16	5	Bt-1139
Saginaw Mining Co.	Saginaw Mine	Richland	8	60	slope	cont. miner	456,658	229	rail	456,045	121		43	Bt-643
									truck	113				
									Total	456,158				

CARROLL COUNTY — Total production = 280,852 tons												
Blum Coal Co.	Blum-Pickens Pit	Washington	6	26	surface	strip	16,054	289	truck	16,054	3	3	Cl-231
			7	26									
Industrial Mining Co.	Burns	Brown	6	36	surface	strip	1,293	51	truck	1,293	1		Cl-223
	Jones	Brown	5	30	surface	strip	7,792	51	truck	11,814	1		Cl-225
			6	30		auger	4,022						
						Total	11,814						
James Bros. Coal Co.	James Bros. Coal Co.	Rose	6	42	surface	strip	56,919		truck	56,919			Cl-17
			6A	24									
	James Bros. Coal Co.	Rose	6	42	surface	strip	75,332	215	truck	75,332	26	5	Cl-162
Mac Mining Co.	CAM #4	Lee	H	20	surface	strip	30,543	256	truck	32,620	6		Cl-230
						auger	2,077						
						Total	32,620						
	CAM #3	Union	H	12	surface	strip	2,657		truck	2,657			Cl-226
Midway Coal, Inc.	Midway Coal, Inc.	Brown	6	30	surface	strip	1,433	26	truck	2,459	1		Cl-22
			6A	30		auger	1,197						
						Total	2,630						
Puskarich Limestone Co.	Puskarich Limestone	Lee	H, 8, 9		surface	strip	40,456	217	truck	43,795	13		Cl-183
						auger	3,339						
						Total	43,795						
Regal Mining, Inc.	Blum-Noble	Lee	H	19	surface	strip	5,907	18	truck	5,907	1		Cl-216
	WWH	Lee	H	19	surface	strip	31,697	127	truck	31,697	9	2	Cl-227
	Camp Ecco	Perry	H	19	surface	strip	134	1	truck	134	1		Cl-233
COLUMBIANA COUNTY — Total production = 707,485 tons													
Blum Coal Co.	Guilford Lake Job	Center	6	20	surface	strip	31,258	221	truck	31,258	3	7	Ca-B[8]
	DeAngelo Pit	Franklin	7	24	surface	strip	13,504	136	truck	13,504	1		Ca-938
Cardinal Mining, Inc.	Brown	Elkrun	6A	24	surface	strip	33,156	166	truck	33,156	5	2	Ca-C[8]
			7	26									
Center Mining Co.	Ullom	Center	7A	42	surface	strip	2,465	31	truck	2,465	1		Ca-904
Coalbrook Mining, Inc.	Toth Strip	Hanover	7	22	surface	strip	28,733	301	truck	28,733	4	2	Ca-854
Commercial Minerals, Inc.	Dungannon	Hanover	7	24	surface	strip	22,263	58	truck	22,263	4		Ca-829
	West Point	Madison	6	40	surface	strip	58,498	155	truck	59,884	7	1	Ca-919
			7	24		auger	1,386						
						Total	59,884						
Crawford Coal Co.	Crawford Coal Co.	Elkrun	6	28	surface	strip	20,967	266	truck	20,967	7		Ca-827
			7	24									
D. & D. Mining Co.	Lyons Pit	Middleton	4	30	surface	strip	17,698	264	truck	17,698	3		Ca-891
	Jack Foster	Unity	4	30	surface	strip	14,235	234	truck	14,235	6	1	Ca-872
	John Foster Strip	Unity	4	30	surface	strip	19,340	236	truck	19,340	9	1	Ca-885
	Dickson	Unity	4	30	surface	strip	16,566	156	truck	16,566	4	[9]	Ca-888
East Fairfield Coal Co.	"W" Mine	Fairfield	7	25	surface	strip	10,973	26	truck	14,514	4	1	Ca-894
	Franklin Square	Salem	7	26	surface	strip	36,026	72	truck	36,026	7	1	Ca-344
	"J" Mine	Unity	7	22	surface	strip	27,947	81	truck	27,947	4		Ca-953
Hutson Road Mining Co.	Hutson Road Mining Co.	Middleton	7	32	surface	strip	488	2	truck	488			Ca-917
Industrial Mining Co.	Industrial Mining Co.	Salem	7	36	surface	strip	48,862	77	truck	48,862	3		Ca-I[8]
			7A	36									
	Trares	Wayne	6A	42	surface	strip	139		truck	1,504		2	Ca-909
					drift	cont. miner	1,365						
						Total	1,504						
	Industrial Mining Co.	Wayne	6	36	surface	strip	38,229	77	truck	39,904	5		Ca-932
						auger	1,675						
						Total	39,904						
Jeffco Sales & Mining Co.	"39" McCormick Run	Madison	6A	32	surface	strip	4,337	22	truck	10,909	2	2	Ca-895
						auger	6,572						
						Total	10,909						
Johnson Mining Co.	Johnson Mining	Madison	5, 6		surface	strip	9,037	58	truck	9,037	1		Ca-922
	Johnson Strip	St. Clair	6A, 7		surface	strip	28,850	120	truck	28,850	4	,	Ca-893

[8]No mine number has been assigned by the Division of Mines.
[9]Averages fewer than one employee per month.

1986 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of operator	Name of mine	Township	Seam	Thickness (inches)	Type of mine	Method of production	Tonnage produced in 1986	Days in operation in 1986	Disposition		Employment			State mine number
									Method	Tonnage	Production: Underground	Production: Surface	Non-production	
COLUMBIANA COUNTY (continued)														
K D Coal Co., Inc.	Baker Mine	Fairfield	7	19	surface	strip	34,666	310	truck	34,666		6	1	Ca-343
	Benner Mine	Middleton	6	34	surface	strip	1,674	78	truck	1,674		1	1	Ca-945
Lisbon Coal Crushers, Inc.	Sell/Mattevi	Center	6	36	surface	strip	18,461	47	truck	18,461		4	1	Ca-939
			7	20										
	Baronzzi	Salem	7	36	surface	strip	7,153	10	truck	7,153		1		Ca-923
	Ray Papania	Unity	6	36	surface	strip	38,498	115	truck	38,498		7	[10]	Ca-937
			7	36										
M & M Builder's Supply	Madden	Unity	7	30	surface	strip	1,089	13	truck	1,089		2		Ca-877
M & S Coal Co., Inc.	Gaydos	Elkrun	6	28	surface	strip	21,304	214	truck	38,935		13	1	Ca-MS[11]
						auger	17,631							
						Total	38,935							
	Todd	Madison	6	28	surface	strip	22,846	186	truck	24,950		10	1	Ca-863
						auger	2,104							
						Total	24,950							
Mansfield Hawk Mining, Inc.	Mansfield Hawk Mining, Inc.	Center	6	26	surface	strip	18,778	94	truck	18,778		4	1	Ca-933
	Birchfield Strip #4	Franklin	6	22	surface	strip	19,156	144	truck	19,156		3	1	Ca-931
P & J Mining Co.	P & J Mining Co.	Hanover	6	16	surface	strip	1,493		truck	1,493			2	Ca-926
Plate Coal Co.	Plate #2	Madison	6	46	drift	cont. miner	5,732		truck	5,732				Ca-714
Robinson & Sons Mining	Robinson Mine	Center	7		surface	strip	2,331	7	truck	2,331		1		Ca-918
COSHOCTON COUNTY — Total production = 1,573,503 tons														
G & M Mineral Co.	G & M Mineral Co.	Bethlehem	5	30	surface	strip	54,231	264	truck	54,231		12		Cn-757
			6	25										
Ohio Amco, Inc.	Simco	Linton	6		surface	strip	7,503	8	truck	7,503		1	1	Cn-794
Oxford Minerals, Inc.	Milliken Mine	Oxford	6	30	surface	strip	2,455	60	truck	2,455		1		Cn-817
R & F Coal Co.	Adams-Hamilton	Keene	5	35	surface	strip	222,585	254	truck	232,111		23	8	Cn-812
			6	30										
	Roahrig	Linton	5	11	surface	strip	79,653	100	truck	99,468		6	1	Cn-803
			6	26		auger	15,129							
						Total	94,782							
	Frye	Linton	5	30	surface	strip	56,065	231	truck	58,974		6	2	Cn-807
			6	30										
	Ross-Isletta	Linton, Oxford	5	30	surface	strip	151,989	254	truck	164,798		17	6	Cn-811
			6	34		auger	7,005							
						Total	158,994							
	Courtwright	Oxford	5	30	surface	strip	98,650	254	truck	104,775		11	5	Cn-768
			6	30		auger	1,999							
						Total	100,649							
	Bartolec	Oxford	5	30	surface	strip	61,956	254	truck	64,698		6	3	Cn-779
			6	30										
	Wentz-Green	Oxford	5	27	surface	strip	90,873	254	truck	93,089		9	3	Cn-814
			6	30										
R & R Minerals, Inc.	R & R Minerals, Inc.	Clark	5	24	surface	strip	10,763	193	truck	10,763		3		Cn-808
Schlabach Coal Co.	Schlabach-Noble	Lafayette	6	38	surface	strip	5,639	161	truck	5,684		3	2	Cn-776
Simco-Peabody	Simco-Peabody	Franklin	5	26	surface	strip	707,008	197	conveyor	707,008		156	43	Cn-799
			6	40										
GALLIA COUNTY — Total production = 446,041 tons														
Crown City Mining, Inc.	Crown City Mine	Guyan	8A	34	surface	strip	264,235	155	water	260,095		46	16	Ga-220[12]
Green & Burritt Coal Co., Inc.	Green Strip	Huntington	6	54	surface	strip	59,168	254	truck	59,168		5	4	Ga-242
Kymcoal, Inc.	Kymcoal #1	Huntington	6, 6A		drift	cont. miner	34,932	49	truck	34,932	7		2	Ga-246
	Kymcoal #2	Huntington	6, 6A		drift	cont. miner	30,112	26	truck	30,112	5		2	Ga-247
Merco Mining, Inc.	Merco Strip #2	Huntington	6		surface	strip	57,594	57	truck	57,594		21	10	Ga-240

GUERNSEY COUNTY — Total production = 222,446 tons													
L. & M. Coal Co.	L. & M. Coal Co.	Jackson	7	36	surface	strip	14,123	203	truck	14,123	3	1	Gy-303
R & F Coal Co.	Hart	Wheeling	5	29	surface	strip	72,058	192	water	28,530	16	4	Gy-300[13]
			6	30		auger	37,077		truck	80,772			
						Total	109,135		Total	109,302			
R. V. G., Inc.	R. V. G. #4	Jackson	7	42	surface	strip	45,771	70	truck	45,771	4		Gy-301R[14]
	R. V. G. #5	Valley	7	48	surface	strip	49,600	40	truck	49,600	6	1	Gy-305
Thompson Mining Co.	Jacobs Property	Jackson	7	45	surface	strip	3,817	20	truck	3,817	1		Gy-301T[14]
HARRISON COUNTY — Total production = 3,374,168 tons													
C K & K, Inc.	C K & K, Inc.	Monroe	7	38	surface	strip	18,306	80	truck	24,090	5	3	Hn-208
						auger	5,784						
						Total	24,090						
Consolidation Coal Co.	Franklin #125	Athens	8	62	shaft	longwall	104,372	21	truck	126,983	15	24	Hn-203[15]
						cont. miner	22,611						
						Total	126,983						
	Mahoning Valley #33	Athens, Short Creek	8	62	surface	auger	2,701	1	truck	2,701		10	Hn-700
	Oak Park #107	Cadiz	6A	60	shaft	longwall	959,923	258	conveyor	1,308,819	155	43	Hn-658
						cont. miner	348,896						
						Total	1,308,819						
Fairpoint Coal Co.	Shepardstown	Short Creek	11	32	surface	strip	8,970		truck	8,970			Hn-205
Huberta Coal Co.	Rose Valley-587	Green	8	48	surface	strip	14,883	121	water	6,186	3		Hn-222
									truck	8,697			
									Total	14,883			
R & F Coal Co.	Strauss	Archer	8	55	surface	strip	55,759	190	water	50,166	6	3	Hn-207
			8A	12					truck	1,889			
									Total	52,055			
	Croskey	Green	8	54	surface	strip	91,860	254	water	86,882	11	6	Hn-216
			8A	18					truck	1,360			
			9	27					Total	88,242			
	Lamborn	Green	8	55	surface	strip	27,165	192	water	26,885	4	1	Hn-218
			8A	15									
	Anderson	Short Creek	11	40	surface	strip	156,114	192	water	153,438	20	8	Hn-221
	Reppart	Short Creek	8	55	surface	strip	37,396	106	water	36,692	5	2	Hn-223
						auger	1,202		truck	3,872			
						Total	38,598		Total	40,564			
	Rinks	Short Creek	9	30	surface	strip	53,489	254	water	64,498	8	3	Hn-224
						auger	13,278						
						Total	66,767						
	Mihelios-Pruneski	Short Creek	8	60	surface	strip	151,114	254	water	159,786	20	8	Hn-739
			9	34		auger	12,940						
						Total	164,054						
	Penova Meyers	Short Creek	8	52	surface	strip	29,014	254	water	31,257	4	5	Hn-746
			8A	20		auger	2,918						
			9	30		Total	31,932						
	Matusik	Short Creek	8	60	surface	strip	274,615	254	water	223,891	34	12	Hn-M[11]
			8A	17					truck	22,628			
			9	30					Total	246,519			
T. P. Mining, Inc.	Monroe Strip	Monroe	7	37	surface	strip	54,738	188	truck	56,330	6	3	Hn-210
						auger	1,593						
						Total	56,331						
Varkony Mining	Varkony Mining	Green	8, 8A		surface	strip	42,053		truck	42,053	3	1	Hn-217
Dallas Vickers	Vickers Mine	Green	8	42	surface	strip	3,244	44	truck	3,244	1		Hn-214

[10]Averages fewer than one employee per month.
[11]No mine number has been assigned by the Division of Mines.
[12]See also Lawrence County.
[13]See also Tuscarawas County.
[14]This mine number has been duplicated for another company.
[15]See also Belmont County.

1986 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of operator	Name of mine	Township	Seam	Thickness (inches)	Type of mine	Method of production	Tonnage produced in 1986	Days in operation in 1986	Disposition		Employment			State mine number
									Method	Tonnage	Production		Non-production	
											Underground	Surface		
HARRISON COUNTY (continued)														
W.B. Coal Co.	Ann Strip 1A	German	H	24	surface	strip	151,201	211	truck	151,201		18	7	Hn-211
	Ann Strip	German	H	24	surface	strip	64,934	129	truck	36,236		11	4	Hn-694
Y & O Coal Co.	Nelms #2	Green	6A	56	shaft	cont. miner	663,095	220	rail	197,451	225		56	Hn-169
			7	60					truck	450,141				
									Total	647,592				
HOCKING COUNTY — Total production = 149,363 tons														
David Boyle, Inc.	#1 Strip	Ward	6A	30	surface	strip	10,023	66	truck	10,023		2	2	Hg-321
Daft Coal Co.	Daft Coal Co.	Ward	6A		surface	strip	17,849	77	truck	17,849		2		Hg-253
Quality Coal Co.	Wharton Strip	Starr	6A	28	surface	strip	22,414	19	truck	22,414		2		Hg-313
Valley Coal Co.	Coonville	Starr	6, 6A		surface	strip	1,164		water	1,164				Hg-284
	Darmac	Starr	6, 6A		surface	strip	55,908		water	55,908				Hg-295
	Sam's Pit	Starr	6A		surface	strip	42,005		water	42,005				Hg-V[16]
HOLMES COUNTY — Total production = 471,396 tons														
Holmes Limestone Co.	Charm Pits	Clark	5	30	surface	strip	333,987	291	truck	333,987		20	2	Hs-86
			6	30										
	241 Plant	Hardy	3	18	surface	strip	31,576	291	truck	31,576				Hs-67
			4	18										
	Wayne Mine	Prairie	4	26	surface	strip	42,086	292	truck	42,086				Hs-79
	Rodco	Richland	4		surface	strip	20,637		truck	20,637				Hs-87
Miller Mining, Inc.	Wefler Mine	Paint	5		surface	strip	2,167	12	truck	2,167		[17]	[17]	Hs-89
	Shoup Mine	Walnut Creek	5		surface	strip	20,007	127	truck	22,487		2	[17]	Hs-85
	Raber #5	Walnut Creek	5		surface	strip	20,936	218	truck	20,936		2	1	Hs-91
JACKSON COUNTY — Total production = 1,330,420 tons														
B & D Coal, Inc.	B & D Coal #2	Milton	3	24	surface	strip	44,002	210	truck	44,002		2		Jkn-570
			4	30										
Elk Coal Co., Inc.	Bowling Strip	Milton	4, 5		surface	strip	61,615	302	truck	61,615		10	2	Jkn-576
LaMay Coal Co., Inc.	Gilmore Pit	Bloomfield	4	36	surface	strip	29,749	38	truck	29,749		4	1	Jkn-1054[18]
			5	30										
LaMay Industries, Inc.	Gilmore Pit	Bloomfield	4	36	surface	strip	117,331	191	truck	117,331		7	1	Jkn-1054[19]
			5	32										
Milton Mining Co.	Greasy #1	Milton	4A	54	drift	cont. miner	132,079	212	truck	132,079	12		5	Jkn-548
Quality Coal Co.	Broken Arrow	Milton	4	28	surface	strip	126,192	98	truck	126,192		9		Jkn-584
			5	28										
	Buckeye Furnace	Milton	4	24	surface	strip	23,241	18	truck	23,241		2		Jkn-1061
			5	24										
			6	24										
Royal Oak Industries, Inc.	Liberty	Liberty	1	28	surface	strip	17,242	16	truck	17,242				Jkn-530
	Liberty Mine	Lick	1	24	surface	strip	134,397	132	truck	134,397		11	15	Jkn-1059
Sands Hill Coal Co., Inc.	Sands Hill Strip #2	Milton	4A	36	surface	strip	130,624	249	water	10,734		17		Jkn-1055
			5	30					truck	119,890				
			6	15					Total	130,624				
			6A											
Stewart Coal Co.	Stewart Mine	Jackson	1	24	surface	strip	58,429	260	truck	58,429		8		Jkn-578
Stewart Construction Co.	Bush Mine	Jackson	1	10	surface	strip	6,153	56	truck	6,153		1		Jkn-574
Walton Coal Co., Inc.	Walton Coal Co., Inc.	Milton	5	30	surface	strip	9,963	63	truck	9,963		1	3	Jkn-558
Waterloo Coal Co.	Bowman Strip	Bloomfield, Madison	4A	48	surface	strip	439,403	304	truck	439,403		23	16	Jkn-367
			5	34										
			6	12										
JEFFERSON COUNTY — Total production = 1,985,742 tons														
Anthony Mining Co., Inc.	Pipo #51	Knox, Saline	8	48	surface	strip	46,585	255	truck	46,585		30	4	Jfn-788
	Maine 307	Wayne	8	48	surface	strip	112,186		truck	112,186				Jfn-789
Boich Mining Co.	Boich Mining Co.	Cross Creek	8	56	surface	strip	320,003	231	water	67,803		42	15	Jfn-528
									truck	252,200				
									Total	320,003				

D & L Contractors, Inc.	D & L Strip	Smithfield	8 8A	56 18	surface	strip	76,039	237	truck	76,039	14	3	Jfn-780
F & M Coal Co.	E & E Strip	Wayne	8 8A	54 22	surface	strip	30,782		truck	30,782	3		Jfn-784
Industrial Mining Co.	Starn	Springfield	7	36	surface	strip auger Total	13,430 595 14,025	51	truck	14,025	1	2	Jfn-794
Jeffco Sales & Mining Co.	Sun Valley #1	Ross	7	60	surface	strip	6,139	21	truck	6,139	3		Jfn-J[16]
Jefferson Holding, Inc.	Junior #1 Strip	Springfield	6A		surface	strip	1		truck	1	[17]		Jfn-1277
Mackra Minerals	Murray Anthony Mine	Knox	8 8A	52 10	surface	strip	23,754	11	truck	23,754	1		Jfn-790
Ohio Coal & Construction Corp.	No. 30 Strip	Warren	8A 11 12	36 36 60	surface	strip	150,751	263	truck	150,751	13	3	Jfn-801
	No. 38 Medill	Warren	11	34	surface	strip	14,071	109	water truck Total	10,822 3,249 14,071	1		Jfn-1296
	No. 36	Wayne	8 8A	48 24	surface	strip	141,798	198	water truck Total	58,614 83,179 141,798	17	5	Jfn-804
	No. 36 Strip	Wells	8 8A	50 24	surface	strip	44,303	263	truck	44,303	8	7	Jfn-711
Ohio Edison Co.	Ohio Edison Co. Strip Mine	Knox	8	48	surface	strip	141,533	340	water truck Total	44,725 96,808 141,533	20	5	Jfn-1267
Ohio River Collieries, Inc.	Ingold	Salem	8	45	surface	strip	15,242	20	truck	15,242	1	1	Jfn-799
R & F Coal Co.	Cochran-Swad	Mount Pleasant	11	30	surface	strip	38,093	44	water	39,460	4	1	Jfn-802
	Varkony-Kross-Polen	Wayne	8 8A 9	50 22 20	surface	strip auger Total	165,565 6,990 172,555	254	water truck Total	157,290 12,893 170,183	21	7	Jfn-720
	Puskarich	Wayne	8A	44	surface	strip auger Total	5,599 1,254 6,853	104	water	6,979	1	[17]	Jfn-P[16]
S. & D. Construction Corp.	Rankin Mine #4	Knox	8	48	surface	strip auger Total	62,415 5,653 68,068	232	truck	68,068	8		Jfn-797
Schiappa Coal Co., Inc.	No. 43 Strip	Island Creek	8	48	surface	strip	129,919	248	truck	129,919	28	7	Jfn-673
	Smith	Smithfield	8	40	surface	strip	20,919		truck	20,919			Jfn-795
Valley Mining, Inc.	Goose Run-Perrin Run	Smithfield	8 8A	48 20	surface	strip auger Total	165,318 19,760 185,078	250	truck	185,079	14	5	Jfn-785
Weirton Construction Co.	#19	Wells	8	54	surface	strip	169,272	250	truck	162,622	32	3	Jfn-687
Zimnox Coal Co.	Zimnox #4	Wells	8	50	surface	strip	57,773	102	truck	57,773	10	8	Jfn-703
LAWRENCE COUNTY — Total production = 370,953 tons													
Belville Mining Co., Inc.	Brady Creek Mine #1	Washington	4A 5	36 30	surface	strip	126,208	169	water truck other Total	100,098 14,693 5,243 130,034	25	1	Le-432
Collins Mining Co.	Campground Job	Mason	W1	36	surface	strip	47,328	87	truck	47,328	4	1	Le-442
Crown City Mining, Inc.	Crown City Mine	Mason	8A	34	surface	strip	197,417	152	water	201,125	47	15	Ga-220[20]
MAHONING COUNTY — Total production = 323,278 tons													
East Fairfield Coal Co.	"K" Mine	Springfield	4 5	32 32	surface	strip auger Total	70,221 14,009 84,230	183	truck	74,998	15	2	Mg-603

[16]No mine number has been assigned by the Division of Mines.
[17]Averages fewer than one employee per month.
[18]LaMay Coal Co., Inc. operated this mine from January to April 1986. See also LaMay Industries, Inc.
[19]LaMay Industries, Inc. operated this mine from May to December 1986. See also LaMay Coal Co., Inc.
[20]See also Gallia County.

1986 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of operator	Name of mine	Township	Seam	Thickness (inches)	Type of mine	Method of production	Tonnage produced in 1986	Days in operation in 1986	Disposition		Employment			State mine number
									Method	Tonnage	Production		Non-production	
											Underground	Surface		
MAHONING COUNTY (continued)														
East Fairfield Coal Co. (con't)	"C" Mine	Springfield	6	16	surface	strip	6,875	21	truck	7,951		1		Mg-C[21]
	"HP" Mine	Springfield	4	24	surface	strip	139,460	201	truck	131,118		16	2	Mg-HP[21]
			5	20		auger	4,164							
						Total	143,624							
Ted Mesmer & Sons	V Pts. Mine	Beaver	5		surface	strip	13,536	309	truck	13,536		4	2	Mg-59
SME Bessemer Cement, Inc.	Budry	Poland	4	18	surface	strip	6,313	21	truck	176		3		Mg-608
Thompson Bros. Mining Co.	Peres Mine	Beaver	4	30	surface	strip	68,700	312	truck	68,700		11	1	Mg-65
MEIGS COUNTY — Total production = 3,777,492 tons														
Southern Ohio Coal Co.	Meigs Mine #2	Columbia	4A	57	shaft	longwall	1,845,467	241	conveyor	2,725,280	430		147	Ms-294
						cont. miner	856,143							
						Total	2,701,610							
	Meigs Mine #1	Salem	4A	57	shaft	cont. miner	1,075,882	241	conveyor	1,080,947	258		358	Ms-293
MONROE COUNTY — Total production = 3,571,638 tons														
Quarto Mining Co.	Powhatan #4	Salem	8	59	shaft	longwall	2,833,887	238	water	3,562,458	624		294	Me-4
						cont. miner	737,751							
						Total	3,571,638							
MUSKINGUM COUNTY — Total production = 1,822,078 tons														
Central Ohio Coal Co.	Muskingum Mine	Meigs	9	39	surface	strip	906,702	115	conveyor	982,845		119	274	Ne-41[22]
						auger	76,160		other	17				
						Total	982,862		Total	982,862				
Cravat Coal Co.	Rix Mills	Rich Hill, Union	8		surface	strip	115,842	236	rail	79,695		20	1	Mum-249
						auger	1,302		water	5,363				
						Total	117,144		truck	32,086				
									Total	117,144				
King Quarries, Inc.	King Strip	Washington	6	32	surface	strip	4,021		truck	7,034		2	2	Mum-251
						auger	3,013							
						Total	7,034							
	King Strip	Wayne	6	32	surface	strip	32,417		truck	32,417		5	2	Mum-237
Muskingum Mining, Inc.	Muskingum Mine	Madison	6	32	surface	strip	629,424	263	conveyor	662,975		118	43	Mum-206
Sands Mining Corp.	Sands Mining Corp.	Washington	6	35	surface	strip	53,197	120	truck	53,197		16	12	Mum-239
			7	38										
NOBLE COUNTY — Total production = 2,747,938 tons														
B & N Coal, Inc.	Pipeline	Marion, Stock	9	30	surface	strip	15,441	34	truck	15,441		2	[23]	Ne-137
	Sorg	Stock	9	30	surface	strip	1,995	3	truck	1,995		[23]	5	Ne-138
	Guiler	Stock	9	30	surface	strip	268,255	138	truck	268,255		9	5	Ne-146
	Quaker	Wayne	9		surface	strip	5,885	34	truck	5,886		[23]		Ne-136
Bennoc, Inc.														
Central Ohio Coal Co.	Muskingum Mine	Brookfield, Noble, Sharon	9	38	surface	strip	2,291,829	116	conveyor	2,394,070		237	281	Ne-41[24]
						auger	102,257		other	16				
						Total	2,394,086		Total	2,394,086				
R & F Coal Co.	Flood-Cline	Beaver	9	30	surface	strip	56,744	211	water	38,499		8	3	Ne-FC[21]
						auger	3,551		truck	20,793				
						Total	60,295		Total	59,292				
	Gibson	Beaver	9		surface	strip	1,981	42	water	1,844		[23]		Ne-G[21]

PERRY COUNTY — Total production = 2,201,464 tons													
Crooksville Coal Co.	Crooksville Strip	Bearfield	5	30	surface	strip	234,107	269	truck	240,415	48	7	Py-317
			6	42									
Crooksville Coal Co. Strip-Tri-State Coal Sales, Inc.	Crooksville Coal Co. Strip-Tri-State-Coal	Clayton, Harrison	5, 6	40	surface	strip	69,983	295	truck	69,983	12		Py-317C[25]
Dennis Clay Co.	Browning Mine	Harrison	5	24	surface	strip	35,166	39	truck	35,166	1		Py-331
			6	32									
Knowlton Industries	Norma Strip	Hopewell	2	22	surface	strip	103		truck	103			Py-K[21]
Peabody Coal Co.	Sunnyhill #9 North	Bearfield	6	52	drift	cont. miner	841,411	238	rail	739,652	173	28	Py-271
									truck	82,174			
									Total	821,826			
	Sunnyhill #9 South	Pleasant	6	53	drift	cont. miner	908,411	238	rail	798,087	175	28	Py-265
									truck	88,664			
									Total	886,751			
Seamco, Inc.	Merco Mining, Inc.	Pleasant	6	30	surface	strip	13,307	59	truck	13,307	5	5	Py-316
Shawnee Coal Co.	Shawnee Coal Co.	Salt Lick	6	144	surface	strip	21,874	135	truck	21,874	6	1	Py-323
	Shawnee Coal Co.	Salt Lick	7	50	surface	strip	26,139	151	truck	26,139	6	1	Py-326
Star Mining Co., Inc.	Howdyshell	Jackson	6	34	surface	strip	22,792	192	truck	22,792	14		Py-321
	Adcock	Jackson	6	32	surface	strip	20,513	65	truck	21,707	2		Py-S[21]
Transpacific Technology of Ohio	Rehoboth Reclamation Project	Clayton	6		surface	[26]	7,658	45				15	Py-332
STARK COUNTY — Total production = 540,662 tons													
C M Mining, Inc.	#1 C M Mine	Pike	5	21	surface	strip	17,968	125	truck	17,968	4	4	Sk-214
			5A	12									
			6	36									
			6A	36									
East Ohio Limestone Co.	East Ohio Limestone Co.	Lake	4	40	surface	strip	3,283	21	truck	3,283	1	1	Sk-663
ENZ, Inc.	Sickafoose Pit	Sandy	4	42	surface	strip	97,034	287	truck	97,034	14	3	Sk-208
Hillcrest Coal, Ltd.	Hillcrest Coal	Osnaburg	5	20	surface	strip	16,116	182	truck	16,116	3		Sk-221
			6	34									
Holmes Limestone Co.	Bolivar Mine	Tuscarawas	4		surface	strip	5,677	43	truck	5,677			Sk-235
Horizon Coal Corp.	Horizon Strip-Canton	Pike	4	24	surface	strip	45,309	84	truck	45,309	4	3	Sk-223
			5	30									
			6	24									
	Horizon Strip-East Sparta	Pike	5	30	surface	strip	41,146	109	truck	41,146	3	2	Sk-230
			6	24									
Industrial Mining Co.	Industrial Mining Co.	Sandy	5	17	surface	strip	54,188	50	truck	54,188	2		Sk-236
			6	17									
K & R Mining, Inc.	Foltz	Osnaburg	5	30	surface	strip	170,288	255	water	37,478	24	28	Sk-225
			6	30		auger	8,052		truck	140,862			
			6A	18		Total	178,340		Total	178,340			
	Egan	Paris	5	28	surface	strip	23,011	139	truck	23,011	4	1	Sk-234
			6	28									
Kohl Industries	Black Hawk	Bethlehem, Pike	4	22	surface	strip	17,528	308	truck	17,528	5	2	Sk-217
			5	22									
			5A	18									
Mansfield Hawk Mining, Inc.	Mansfield Hawk Mining, Inc.	Paris	5	20	surface	strip	3,934	73	truck	6,939	1	1	Sk-201
			6	30		auger	3,005						
			7	10		Total	6,939						
	Mansfield Hawk Mining, Inc.	Paris	5	20	surface	strip	1,106	20	truck	1,106	[23]	[23]	Sk-232
Wilmot Mining Co.	Wilmot Mining Co.	Canton	5	21	surface	strip	33,017	90	truck	30,103	7	4	Sk-233
			6	36									
TUSCARAWAS COUNTY — Total production = 1,648,980 tons													
Angel Valley Mining, Inc.	Angel Valley Mining, Inc.	Bucks	5		surface	strip	7,325	55	truck	3,947	2		Ts-1955
Arapaho Mining, Inc.	Arapaho Mining, Inc.	Clay	6	36	surface	strip	18,122	26	truck	18,122	4	2	Ts-1979
	Arapaho Mining, Inc.	Fairfield	7	38	surface	strip	47,542	207	truck	47,542	7	1	Ts-1956
Arrow Head Energy, Inc.	Hopkins-Schupp	Warwick	5	20	surface	strip	24,597	55	truck	24,597	3	4	Ts-1890
			6	42									

[21]No mine number has been assigned by the Division of Mines.
[22]See also Noble County.
[23]Averages fewer than one employee per month.
[24]See also Muskingum County.
[25]This mine number has been duplicated for another company.
[26]Recovering saleable coal by processing refuse material from previous surface mining activity.

1986 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of operator	Name of mine	Township	Seam	Thickness (inches)	Type of mine	Method of production	Tonnage produced in 1986	Days in operation in 1986	Disposition		Employment			State mine number
									Method	Tonnage	Production: Underground	Production: Surface	Non-production	
TUSCARAWAS COUNTY (continued)														
Burning Hollow Coal Co., Inc.	#2 Pit	Union	7	33	surface	strip	8,563	72	truck	9,560		3	4	Ts-1932
						auger	997							
						Total	9,560							
C K & K, Inc.	C K & K, Inc.	Sugar Creek	3A	36	surface	strip	24,566	45	truck	11,506		4	2	Ts-1974
Cravat Coal Co.	Anco Seven Coal	Rush	7		surface	strip	7,890	13	truck	7,890		1		Ts-1970
	Toad Hollow	Rush	7		surface	strip	3,488	22	rail	3,091		1		Ts-1972
									truck	397				
									Total	3,488				
Daron Coal Co.	Harstine	Sugar Creek	3B	26	surface	strip	85,823	274	truck	87,375		10	1	Ts-1924
						auger	1,552							
						Total	87,375							
	Marino	Sugar Creek	4	22	surface	strip	29,948	276	truck	29,948		2		Ts-1966
DiChiera Coal Co.	DiChiera Coal Co.	Mill	7	9	surface	strip	5,593		truck	5,593				Ts-1959
Eberhart Coal, Inc.	Eberhart #2 Hott Strip	Dover	5, 5A, 6		surface	strip	53,717	272	truck	57,595		5	8	Ts-1526
	Eberhart #2 Hott Strip	Dover	5, 5A		surface	strip	26,088	252	truck	29,555		3	4	Ts-1882
	Eberhart #2 Hott Strip	Fairfield	5, 5A, 6		surface	strip	43,852	272	truck	54,791		5	10	Ts-1919
						auger	6,104							
						Total	49,956							
	Eberhart #2 Hott Strip	Lawrence	5, 5A, 6		surface	strip	8,833	76	truck	11,094		1	5	Ts-1620
Empire Coal Co.	Empire Coal Co.	Clay	5, 6	60	surface	strip	271,243	274	truck	544,842		50	31	Ts-115
						auger	46,900							
						Total	318,143							
	Dichler	Salem	6	30	surface	strip	67,591	243	truck	81,101		15	2	Ts-1964
						auger	13,510							
						Total	81,101							
	Anco Strip	Washington	6, 6A		surface	strip	67,417	189	truck	78,970		24	4	Ts-1963
						auger	11,553							
						Total	78,970							
GEX Hardy, Inc.	Ragersville	Auburn	5, 6	24	surface	strip	12,263	42	truck	12,263		3	3	Ts-1946
	Burkey	Sugar Creek	5, 6	36	surface	strip	54,991	171	truck	54,993		5	6	Ts-1968
Horizon Coal Corp.	Horizon Strip-Belden	Sandy	4	24	surface	strip	81,459	122	truck	81,459		5	3	Ts-1941
			5, 5A	36										
			6	30										
	Horizon Strip-Ladrach	Sandy	5, 5A	36	surface	strip	15,653	33	truck	15,653		1	1	Ts-1962
			6	30										
J D Mining, Inc.	Demuth Pit	Goshen	5	30	surface	strip	11,329	80	truck	11,329		1	1	Ts-1936
			6	40										
	Baltzley Valley Mine	Goshen	6	40	surface	strip	26,717	174	truck	47,042		4	1	Ts-1969
						auger	20,325							
						Total	47,042							
Kimble Clay & Limestone Co.	Kimble Clay & Limestone	Sugar Creek	3A	32	surface	strip	107,465	128	truck	107,465		3	4	Ts-1727
			4	10										
			5	32										
			6	32										
L & M Minerals, Inc.	Evans	Mill, Rush	6, 7	40	surface	strip	15,394		truck	15,394		7		Ts-1884
	Romig	Rush	6	40	surface	strip	29,032		truck	29,032		6		Ts-1930
Red Malcuit, Inc.	RMI #1	York	5	30	surface	strip	56,043	241	truck	66,702		11		Ts-1918
			6	36		auger	10,659							
						Total	66,702							
Miller Mining, Inc.	M & M Strip	Dover	5, 6		surface	strip	13,452	140	truck	13,452		1		Ts-1973
	Whoobler	Wayne	5		surface	strip	7,596	63	truck	5,190		8	4	Ts-1947
	Hershberger 3A	Wayne	3A, 4		surface	strip	31,319	218	truck	33,353		3	1	Ts-1958

Mudsock Minerals, Inc.	Siffy	York	6	42	surface	strip	40,610	173	truck	54,736		3	3	Ts-1965M[27]
						auger	14,126							
						Total	54,736							
Puskarich Mining, Inc.	New Cumberland	Warren	5, 6		surface	strip	56,294	148	rail	116		6		Ts-1917
									water	28,106				
									truck	28,072				
									Total	56,294				
R & E Coal Co.	R & E Coal Co.	Jefferson	6	27	surface	strip	10,119	111	truck	10,806		3	2	Ts-1925
						auger	687							
						Total	10,806							
R & F Coal Co.	Allgyer-Schupp	Clay	7	27	surface	strip	29,429	176	water	33,791		3	2	Ts-1945
						auger	5,025							
						Total	34,454							
	Regula	Jefferson	5	28	surface	strip	1,551		truck	1,589		1		Ts-R[28]
	Hart	Oxford	5	29	surface	strip	17,512		water	3,298				Gy-300[29]
			6	30		auger	14,438		truck	28,688				
						Total	31,950		Total	31,986				
	Furbay-Beem	Rush	7		surface	strip	9,622	106	water	10,513		1	2	Ts-1978
						auger	326							
						Total	9,948							
	Tusco-Mills	Salem	5	28	surface	strip	14,565	170	water	3,879		3	2	Ts-1971
			6	30		auger	9,563		truck	19,924				
						Total	24,128		Total	23,803				
Sugarcreek Clay & Limestone, Inc.	Sugarcreek Clay & Limestone	Sugar Creek	4		surface	strip	5,780					1	7	Ts-1928
Valley Mining, Inc.	S & C Development	Mill	6		surface	strip	793	22	truck	793		1		Ts-V[28]
	Putnam	Rush	7	30	surface	strip	26,584	243	truck	31,740		4	1	Ts-1957
						auger	5,156							
						Total	31,740							
Vic Mining, Inc.	Newport Pit Strip	Mill	5, 6		surface	strip	6,596	75	truck	6,596		1		Ts-1965V[27]
Zoar Mining Co.	Zoar Mining Co.	Sandy	4		surface	strip	959		truck	959		[30]	1	Ts-538
	Zoar Mining Co.	Sandy	4		surface	strip	2,734	49	truck	2,734		1	1	Ts-540
VINTON COUNTY — Total production = 1,784,578 tons														
B & D Coal, Inc.	B & D Coal #1	Clinton	3	24	surface	strip	27,828	85	truck	27,828		4	12	Vn-623
			4	30										
Benedict, Inc.	Zimmerman	Elk	3		surface	strip	357	66	truck	357		1	[30]	Vn-179
	Benedict, Inc.	Swan	4		surface	strip	13,734	66	truck	13,734		2		Vn-171
	Mitchell Hollow	Swan	4A, 5		surface	strip	27,132	66	truck	27,132		1		Vn-172
	Zaleski	Swan	4, 5		surface	strip	34,865	66	truck	34,865		5	2	Vn-180
	Puckett	Wilkesville	7		surface	strip	8,396	66	truck	8,396		1	1	Vn-170
R. A. Eberts Co.	McArthur Pit	Elk	4, 5		surface	strip	104,881		truck	104,881		13		Vn-163[31]
Eberts Coal Co., Inc.	Quarry Mine	Elk	4, 5		surface	strip	30,900		truck	30,900		2	5	Vn-163[32]
Elk Coal Co., Inc.	Elk Strip	Richland	4, 5		surface	strip	3,008	21	truck	3,008		1	[30]	Vn-176
Quality Coal Co.	Church	Clinton	4	28	surface	strip	29,318	26	truck	29,318		2		Vn-181
			5	28										
			6	28										
	Sentry	Clinton	4	28	surface	strip	249,905	117	truck	249,905		17		Vn-655
			5	28										
			6	28										
R & S Coal Co., Inc.	R & S Strip	Clinton	3	30	surface	strip	22,715	135	truck	22,715		3		Vn-173
Sands Hill Coal Co., Inc.	Sands Hill Strip	Clinton	W	40	surface	strip	161,496	254	water	22,151		22	19	Vn-641
			4A	36					truck	139,345				
			5	30					Total	161,496				
			6	20										
			6A	20										
Southern Ohio Coal Co.	Raccoon Mine #3	Wilkesville	4A	57	drift	cont. miner	1,070,043	242	rail	1,065,751	241		169	Vn-652
WASHINGTON COUNTY — Total production = 181,202 tons														
B & N Coal, Inc.	Shook	Aurelius	9	40	surface	strip	4,226	7	truck	4,226		1	2	Wn-1004
	Lincoln Pit	Aurelius	9	40	surface	strip	176,976	125	truck	176,976		10	6	Wn-1005

[27]This mine number has been duplicated for another company.
[28]No mine number has been assigned by the Division of Mines.
[29]See also Guernsey County.
[30]Averages fewer than one employee per month.
[31]R. A. Eberts Co. operated this mine for the second, third, and fourth quarters of 1986. See also Eberts Coal Co., Inc.
[32]Eberts Coal Co., Inc. operated this mine for the first quarter of 1986. See also R. A. Eberts Co.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Paul Adams Coal Co. 46 Vaughn St. Jackson, OH 45640 614-286-1063 Kathryn Adams, pres.	Adams Pit (20)	Jackson	clay	[1]		Jkn-568	IM-825
Agg Rok Materials Div. of Wapak Sand & Gravel Co. 711 Frank Rd. Columbus, OH 43223 614-443-0466 Ralph E. Heffner, pres.	Agg Rok (94)	Franklin	sand & gravel	368,149	353,049	Fn-36	IM-302
Aggregate Services, Inc. 6025 Dixie Hwy. Suite 200 Fairfield, OH 45014 513-867-1454 James E. Broshear, pres.	Aggregate Services, Inc. (28)	Butler	sand & gravel	17,572	32,946	Br-36	IM-649
Alan Stone Co., Inc. P.O. Box 127 Chesterhill, OH 43728 614-554-6191 Ruth E. Janes, pres.	Alan Stone Co., Inc. (43)	Washington	sandstone	[1]		Wn-45	IM-125
Alexandria Materials Co. P.O. Box 7 Alexandria, OH 43001 614-924-6611 Richard A. Hall, pres.	Alexandria Pit (173)	Licking	sand & gravel	61,239	89,596	Lg-8[2]	IM-271
Allied Corp. 1750 Highland Dr. Twinsburg, OH 44087 216-425-7861 Clayton A. Edwards, pres.	Allied Corp. (316)	Stark	sand & gravel	[3]		Sk-173	IM-156
American Aggregates Corp. P.O. Drawer 160 Greenville, OH 45331 513-548-2111 William E. Hole, Jr., pres.	Hamilton #710 (29)	Butler	sand & gravel	347,093	347,093	Br-5	IM-153
	Fairfield #711 (30)	Butler	sand & gravel	876,276	876,276	Br-35	IM-200
	Urbana #215 (48)	Champaign	sand & gravel	233,564	233,564	Cpn-1	IM-371
	Springfield #223 (16)	Clark	limestone	106,208	106,208	Ck-1	IM-373
	Fairborn #413 (52)	Clark	sand & gravel	404,905	404,905	Ck-13	IM-366
	American Aggregates Corp. (78)	Darke	sand & gravel	[3]		Dke-1	IM-363
	Fort Jefferson #424 (19)	Darke	limestone	168,034	168,034	Dke-1	IM-362
	Shawnee #225 (20)	Delaware	limestone	401,809	401,809	Del-4	IM-262
	Blue Rock Limestone #222 (27)	Fayette	limestone	144,581	144,581	Fe-2	IM-169
	Marble Cliff #224 (30)	Franklin	limestone	1,392,422	1,392,422	Fn-2	IM-261
	Columbus #210 (95)	Franklin	sand & gravel	1,312,791	1,312,791	Fn-6	IM-185
	Lockbourne #213 (96)	Franklin	sand & gravel	464,765	464,765	Fn-23	IM-183
	Columbus Limestone #221 (31)	Franklin	limestone	1,050,319	1,050,319	Fn-53	IM-185
	Cedarville Limestone #423 (32)	Greene	limestone	193,631	193,631	Ge-17	IM-435
	Xenia #414 (110)	Greene	sand & gravel	388,522	388,522	Ge-33	IM-379
	Harrison #712 (118)	Hamilton	sand & gravel	299,727	299,727	Hmn-37	IM-170
	Kilby Rd. #713 (119)	Hamilton	sand & gravel	184,514	184,514	Hmn-AAC[4]	IM-716
	Newark #214 (174)	Licking	sand & gravel	345,862	345,862	Lg-2	IM-184
	American Aggregates Corp. (214)	Miami	sand & gravel	[3]		Mi-AAC[4]	IM-658
	Phillipsburg Limestone #421 (70)	Montgomery	limestone	197,577	197,577	My-1	IM-374
	Dayton Limestone #420 (71)	Montgomery	limestone	268,004	268,004	My-23	IM-368
	Dayton South #412 (223)	Montgomery	sand & gravel	[1]		My-33	IM-361
	Rip Rap Road #416 (224)	Montgomery	sand & gravel	438,816	438,816	My-66	IM-677
	American Aggregates Corp. (94)	Preble	limestone	[3]		Pre-AAC[4]	IM-779
	Lytle Limestone #422 (125)	Warren	limestone	1,193	0	Wan-35	IM-112
	Franklin #417 (349)	Warren	sand & gravel	231,676	231,676	Wan-38	IM-615
American Olean Tile Co., Inc. Lewisport, KY 42351 502-295-3411 Jack Thompson, pres.	Jefferys (24)	Lawrence	clay	20,813	19,524	Le-440	IM-828
American Sand & Gravel 8188 Wales Rd. NW North Canton, OH 44720 216-494-6455 Christopher Scala, pres.	American Sand & Gravel (387)	Portage	sand & gravel	[3]		Pe-ASG[4]	IM-212
	American Sand & Gravel (386)	Stark	sand & gravel	[3]		Sk-203	IM-654
Amert Gravel Co. 4843 County Hwy. 43 Rte. 4 Upper Sandusky, OH 43351 419-927-2366 John E. Amert, co-owner	Amert Gravel Co. (379)	Wyandot	sand & gravel	23,813	13,800	Wt-4	IM-520

[1]No sales or production.
[2]This mine was operated 1st through 3rd quarters 1986 by Alexandria Materials Co. and 4th quarter by Newark Asphalt Co.
[3]No report filed in 1986.
[4]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Apache Aggregate & Paving Co. 46626 County Rte. 495 Coshocton, OH 43812 614-622-5904 Edward Ross, pres.	Apache Aggregate & Paving Co. (69)	Coshocton	sand & gravel	[5]		Cn-718	IM-227
	Apache Aggregate & Paving Co. (70)	Coshocton	sand & gravel	71,666	97,816	Cn-783	IM-717
Armco, Inc. 1750 W. Statler Rd. Piqua, OH 45356 513-773-4824 A. R. Donovan, mgr.	Piqua Minerals (64)	Miami	limestone	401,872	371,490	Mi-1	IM-382
Ashcraft Sand & Gravel 5840 Dryfork Rd. Cleves, OH 45002 513-367-2177 Otis Ashcraft, pres.	Ashcraft Sand & Gravel (120)	Hamilton	sand & gravel	34,133	34,133	Hmn-54	IM-710
Athens Building Materials Co., Inc. 250 N. Columbus Rd. P.O. Box N Athens, OH 45701 614-592-2088 Carl J. Murphy, pres.	Kimberly Pit (18)	Athens	sand & gravel	[6]		As-1117	IM-369
Ayers Limestone Quarry, Inc. 2000 Colerain Pike P.O. Box 67 Martins Ferry, OH 43955 614-633-2958 Thomas E. Ayers, pres.	Ayers Limestone Quarry (12)	Belmont	limestone	150,065	150,065	Bt-716	IM-1
Baker Sand, Inc. 9857 Friendsville Rd. Burbank, OH 44214 216-948-1448 Thom E. Baker, pres.	Baker Sand, Inc. (202)	Medina	sand & gravel	114,724	114,724	Ma-4	IM-442
	Baker Sand, Inc. (203)	Medina	sand & gravel	648,958	648,958	Ma-20	IM-426, IM-448
Barrett Paving Materials, Inc. 9570 State Rte. 128 Harrison, OH 45030 513-738-1201 J. E. Webb, mgr.	Barrett Paving Materials, Inc. (121)	Hamilton	sand & gravel	360,811	386,829	Hmn-44	IM-120
Basic Refractories Combustion Engineering P.O. Box 600 Bettsville, OH 44815 419-986-5111 G. Mattson, supt.	Maple Grove Works (106)	Seneca	limestone	[6]		Sa-2	IM-352
Beaver Creek Sand & Gravel, Inc. 7219 Salem Unity Rd. Salem, OH 44460 216-337-3534 Delyte DeYarmon, pres.	Beaver Creek Sand & Gravel, Inc. (64)	Columbiana	sand & gravel	[5]		Ca-855	IM-109, IM-891
	(3)		sandstone	[5]			
Beck Sand & Gravel, Inc. 2820 Webb Rd. Ravenna, OH 44266 216-626-3863 Robert E. Wenrich, pres.	Beck Sand & Gravel, Inc. (256)	Portage	sand & gravel	229,705	229,705	Pe-50	IM-96
Becky Lane Trucking, Inc. 441 Iowa St. Ashland, KY 41101 606-325-8301 Janet S. Robinson, pres.	Becky Lane Sand (167)	Lawrence	sand & gravel	23,075	23,075	Le-430	IM-844
Belden Brick Co. P.O. Box 910 Canton, OH 44701 216-852-2424 William H. Belden, Jr., pres.	Moomaw Pit (32)	Tuscarawas	sandstone	[6]		Ts-1517	IM-46
	(56)		clay	51,560	51,560		
	(56)		shale	52,277	52,277		
	Finzer-Belden (116)	Tuscarawas	limestone	[6]		Ts-1646	IM-44
	(57)		clay	49,956	49,956		
	(57)		shale	118,698	118,698		
	Wallick Pit (58)	Tuscarawas	clay	108,467	108,467	Ts-1841	IM-45
	(58)		shale	27,307	27,307		
	Shanesville Pit (59)	Tuscarawas	clay	28,629	28,629	Ts-1939	IM-47
	(59)		shale	64,111	64,111		
	Beagle Pit (60)	Tuscarawas	clay	2,961	2,961	Ts-1960	IM-48
Bellbrook Gravel Co. P.O. Box 440 Tipp City, OH 45371 513-667-4431 James Ernest, pres.	Bellbrook Gravel Co. (350)	Warren	sand & gravel	279,640	279,640	Wan-24	IM-437

[5]No report filed in 1986.
[6]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Belu & Son Paving, Inc. 4900 French Creek Rd. Lorain, OH 44054 216-277-7087 John W. Belu, pres.	Belu Sand Pit (191)	Lorain	sand & gravel	2,616	2,616	Ln-12	IM-731
Belville Mining Co. P.O. Box 309 Wheelersburg, OH 45694 614-574-8464 Thomas J. Belville, pres.	Brady Creek (25) (25) (140)	Lawrence	clay shale limestone	5,869 [7] 0	5,869 20,000	Le-403	IM-738
Benco Leasing, Inc. State Rte. 416 Rte. 3 New Philadelphia, OH 44663-9507 216-339-3339 Ben Cookson, owner	Goshen 416 Site (389)	Tuscarawas	sand & gravel	1,577	1,577	Ts-1976	IM-941, IM-942
Best Sand Corp. 11830 Ravenna Rd. P.O. Box 87 Chardon, OH 44024 216-946-3441 Ewald Sems, treas.	Best Sand Corp. (17)	Geauga	sandstone	410,624	437,156	Gea-3	IM-89
Best Silica Co. 11830 Ravenna Rd. P.O. Box 87 Chardon, OH 44024 216-946-3441 Ewald Sems, treas.	Best Silica Co. (16)	Geauga	sandstone	86,023	69,507	Gea-36	IM-337
Beverly Slag Co. P.O. Box 599 McConnelsville, OH 43756 614-962-5621 Fred R. Price, pres.	Devola Pit (364)	Washington	sand & gravel	[7]		Wn-55	IM-669
Big Walnut Sand & Gravel Co. 45 N. Wilson Rd. Columbus, OH 43204 614-276-2678 Ralph G. Walls, mgr. partner	Big Walnut Sand & Gravel Co. (97)	Franklin	sand & gravel	31,740	31,740	Fn-14	IM-832
Black Top Contracting, Inc. P.O. Box 98 Belpre, OH 45714 614-423-5455 Anis M. Wyatt, pres.	Black Top #1 (19)	Athens	sand & gravel	11,825	11,825	As-588	IM-630
E. E. Blair Construction Co. P.O. Box 31 Wheelersburg, OH 45694 614-574-6575 Edwin E. Blair, pres.	E. E. Blair Construction Co. (303)	Scioto	sand & gravel	1,330	1,330	So-98	IM-474
Bluffton Stone Co. P.O. Box 26 Bluffton, OH 45817-0026 419-358-6941 Maurice Fett, pres.	Bluffton Stone Co. (3)	Allen	limestone	88,034	79,927	An-1	IM-485
Elmer Borchardt, Inc. 313 E. Lucas St. P.O. Box 188 Castalia, OH 44824-0188 419-684-5361 Dean Borchardt, pres.	Elmer Borchardt, Inc. (83)	Erie	sand & gravel	13,700	13,700	Ee-18	IM-676
Bowerston Shale Co. 1329 Seven Hills Rd. NE Newark, OH 43055 614-269-2921 William U. Milliken, pres.	Bowerston Shale Co. (11) Bowerston Shale Co. (31) Bowerston Shale Co. (38)	Harrison Licking Muskingum	shale shale clay	43,000 23,944 9,527	43,000 23,944 9,527	Hn-152 Lg-501 Mum-776	IM-42 IM-257 IM-256
D. H. Bowman & Sons, Inc. State Rte. 97 P.O. Box 57 Bellville, OH 44813-1227 419-886-2711 Richard D. Bowman, pres.	D. H. Bowman & Sons, Inc. (287)	Richland	sand & gravel	30,151	45,818	Rd-4	IM-279
Boyas Excavating, Inc. 4100 Brookpark Rd. Cleveland, OH 44134-1196 216-398-3900 Pete Boyas, pres.	Boyas' Valley View Quarry (13)	Cuyahoga	sandstone	7,500	13,500	Cya-BE[8]	IM-686

[7]No sales or production.
[8]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Boyd Gravel Co. 24270 Twp. Rd. 1202 Coshocton, OH 43812 614-622-4406 Don E. Mill, pres.	Boyd Gravel Co. (71)	Coshocton	sand & gravel	119,030	119,030	Cn-694	IM-293
The Brewer Company P.O. Box 44098 Cincinnati, OH 45244 513-561-8843 William A. Brewer, pres.	Plant #11 (59)	Clermont	sand & gravel	57,145	105,178	Ct-9	IM-526
Briar Hill Stone Co. P.O. Box 398 Glenmont, OH 44628 216-276-4011 Fred D. Lydic, pres.	Quarry #26 (4)	Coshocton	sandstone	424	497	Cn-13	IM-397
	Quarry #3 (5)	Coshocton	sandstone	5,595	6,691	Cn-659	IM-232
	Quarry #32 (6)	Coshocton	sandstone	1,234	784	Cn-686	IM-504
	Quarry #24 (7)	Coshocton	sandstone	3,852	4,191	Cn-692	IM-294
	Quarry #18 (8)	Coshocton	sandstone	[9]		Cn-695	IM-402
	Quarry #53 (9)	Coshocton	sandstone	[9]		Cn-731	IM-332
	Quarry #15 (12)	Coshocton	sandstone	419	419	Cn-788	IM-775
	Quarry #54 (11)	Coshocton	sandstone	3,002	2,773	Cn-809	IM-332
	Quarry #55 (44)	Coshocton	sandstone	1,029	1,310	Cn-815	IM-939
	Quarry #31 (19)	Holmes	sandstone	[9]		Hs-49	IM-418
	Quarry #34 (22)	Knox	sandstone	[9]		Kx-10	IM-444
	Quarry #6 (23)	Knox	sandstone	1,846	2,555	Kx-12	IM-445
Briggs Sand & Gravel, Inc. Rte. 4 Box 303 Marietta, OH 45750 614-373-3363 James F. Briggs, pres.	Briggs Sand & Gravel, Inc. (365)	Washington	sand & gravel	13,538	10,353	Wn-508	IM-57
Broadway Sand & Gravel, Inc. 2000 Sandridge Dr. Dayton, OH 45439 513-299-1166 H. H. Cornett, part owner	Broadway Sand & Gravel, Inc. (225)	Montgomery	sand & gravel	85,825	85,825	My-65	IM-594
Bros. Sand & Gravel Co. 5366 County Rd. 349 Rte. 1 Millersburg, OH 44654 216-674-8121 Gene R. Menuez, pres.	Bros. Sand & Gravel Co. (153)	Holmes	sand & gravel	64,134	64,134	Hs-82	IM-707
Broshear Gravel Co. 2520 Millville-Ross Rd. Hamilton, OH 45013 513-863-3388 Clarence Broshear, owner	Broshear Gravel Co. (31)	Butler	sand & gravel	11,516	18,676	Br-48	
Brown County Rock Crusher State Rte. 221 Georgetown, OH 45121 513-378-6456 James G. Beasley, county engineer	Brown County Rock Crusher (14)	Brown	limestone	7,328	7,328	Bn-1	
Daniel L. Browning 5593 Mason-Morrow-Millgrove Rd. Morrow, OH 45152 513-899-3751 Daniel L. Browning, owner	Riverside Sand & Gravel (391)	Warren	sand & gravel	10	0	Wan-B[10]	IM-679
Karl Brugmann Sand & Gravel 8488 Weaver Rd. Ravenna, OH 44266 216-626-3914 Donald H. Brugmann, owner	Karl Brugmann Sand & Gravel (257)	Portage	sand & gravel	90,071	90,071	Pe-15	IM-104
Oscar Brugmann Sand & Gravel, Inc. 3828 Dudley Rd. Mantua, OH 44255 216-274-8224 Roy Brugmann, pres.	Oscar Brugmann Sand & Gravel, Inc. (258)	Portage	sand & gravel	305,609	339,387	Pe-9	IM-119
Charles Bucklew Sand & Gravel Co. 911 County Rd. 175 Polk, OH 44860 419-869-7212 Charles Bucklew, owner	Charles Bucklew (3)	Ashland	sand & gravel	[9]		Ald-3	IM-553
James Bunnell, Inc. 5714 State Rte. 128 Cleves, OH 45002 513-353-1100 James Bunnell, pres.	James Bunnell, Inc. (123)	Hamilton	sand & gravel	288	480	Hmn-50	IM-205
	James Bunnell, Inc. (124)	Hamilton	sand & gravel	324,792	324,792	Hmn-59	IM-815

[9]No sales or production.
[10]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Burlington Sand & Gravel Co. P.O. Box 399 Chesapeake, OH 45619 614-894-5978 Vernon E. Collier, owner	Burlington Sand & Gravel (170)	Lawrence	sand & gravel	10,118	10,118	Le-426	IM-856
C. D. Materials P.O. Box 145 Garrison, KY 41141 606-757-2138 William F. Love, pres.	C. D. Materials (20) Piketon Pit (252)	Athens Pike	sand & gravel sand & gravel	[11] 780	 282	As-1140 Pke-26	IM-101 IM-142
C M Mining, Inc. 7001 Ridge Rd. East Sparta, OH 44626-0267 216-484-6355 Bruce T. Burrow, pres.	#1 C M Mine (39) (50)	Stark	sandstone clay	[12] 9,306	 9,306	Sk-214	IM-798
Canton Aggregate Div. of Central Allied Enterprises, Inc. P.O. Box 1387 Station C Canton, OH 44708 216-477-6751 John A. Woodhall, Jr., pres.	Canton Aggregate (318) Canton Aggregate (319)	Stark Stark	sand & gravel sand & gravel	500,322 151,029	500,322 151,029	Sk-681 Sk-689	IM-164 IM-173
Carpenter's Excavating 4224 Fernbrook St. Kettering, OH 45440 513-299-7328 William Carpenter, owner	Carpenter's Excavating (228)	Montgomery	sand & gravel	1,512	1,512	My-67	IM-725
Cedar Heights Clay Co. P.O. Box 295 Oak Hill, OH 45656-02095 614-682-7794 William T. Tredenick, pres.	Cedar Heights (21) Cedar Heights (22)	Jackson Jackson	clay clay	[12] 17,412	 17,412	Jkn-1001 Jkn-1007	IM-19, IM-336 IM-24
Celotex Corp. P.O. Box 280 Port Clinton, OH 43452 419-734-3153 W. D. Herbert, pres.	American No. 2 (1)	Ottawa	gypsum	213,972	213,972	Oa-2	IM-344
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 J. E. Katlic, pres.	Horse Run (73) Miller Creek (74) Hoskinsville (138)	Morgan Muskingum Noble	limestone limestone limestone	21,183 14,668 200,955	21,183 14,668 200,955	Mon-600 Mum-896 Ne-147	IM-281 IM-301 IM-921
Central Silica Co. 806 Market St. Zanesville, OH 43701 614-452-2775 James P. Snider, gen. mgr.	Millwood Sand Division (24) Central Silica Co. (31)	Knox Perry	sandstone sandstone	165,510 282,585	165,510 282,585	Kx-1 Py-202	IM-269 IM-14
Chaney Mining Co. P.O. Box 492 Lucasville, OH 45648 614-259-2866 Everett & Loren Chaney, partners	Chaney Mining Co. (29)	Lawrence	clay	[11]		Le-362	IM-152, IM-195
Charlestown Sand & Gravel Co. 7845 State Rte. 5 Ravenna, OH 44266 216-296-9233 Raymond Sommers & William Miller, partners	Charlestown Sand & Gravel (259)	Portage	sand & gravel	50,560	50,560	Pe-17	IM-123
Chattin Concrete 9978 State Rte. 220 P.O. Box 49 Waverly, OH 45690 614-947-4677 William H. & W. Jeffery Chattin, co-owners	Chattin Concrete (253)	Pike	sand & gravel	2,625	2,600	Pke-23	IM-242
Chesterhill Stone Co. 773 East State Rte. 60 NE P.O. Box 599 McConnelsville, OH 43756 614-962-5621 Fred R. Price, pres.	Plant #2 (240) Fultonham #1 (75) Plant #3 (366)	Morgan Muskingum Washington	sand & gravel limestone sand & gravel	219,900 561,773 96,923	238,591 517,183 89,245	Mon-588 Mum-106 Wn-56	IM-35 IM-297 IM-857
Chesterville Sand & Gravel Co., Inc. P.O. Box 51 Chesterville, OH 43317 419-768-3369 Carrol D. Gleason, pres.	Chesterville Sand & Gravel Co., Inc. (242)	Morrow	sand & gravel	88,597	88,597	Mw-10	IM-258

[11]No report filed in 1986.
[12]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Gerald L. Christman Rte. 2 Box 110A Lewisville, OH 43754 614-838-2475 Gerald L. Christman, owner	Christman Quarry (69)	Monroe	limestone	50,119	50,119	Me-501	IM-76
Clark Clay Co. R.D. 2 Box 58 Millersburg, OH 44654 216-674-5150 Dwight S. Clark, owner	Clark Clay Co. (17)	Holmes	clay	6,116	3,009	Hs-56	
Claycraft Co. P.O. Box 866 Columbus, OH 43216 614-866-3300 R. C. Nohle, Sr., chief engineer	Claycraft Plant #4 Shale Pit (9) Claycraft Plant #1 Clay Pit (73)	Franklin Wyandot	shale clay	[13] 30,427	 30,427	Fn-1 Wt-7	IM-322 IM-407
Cleveland Quarries Co. P.O. Box 261 Amherst, OH 44001-0261 216-986-4501 R. C. Bechtel, pres.	Birmingham Quarry (14) Amherst Quarries (27)	Erie Lorain	sandstone sandstone	3,174 72,056	3,174 72,056	Ee-21 Ln-3	IM-416 IM-415
Clinton Stone Co. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Alan Arthur, pres.	Sands Hill Strip (124)	Vinton	limestone	259,248	259,248	Vn-174	D-0309
Columbia Portland Cement Corp. P.O. Box 1531 Zanesville, OH 43701 614-849-2311 W. P. Cannon, mgr.	Lyle Quarry (76) (39) Jonathon Mine (76)	Muskingum Muskingum	limestone shale limestone	154,954 8,486 [13]	154,954 8,486	Mum-24 Mum-24 Mum-91	IM-830 IM-303 IM-830
Con-Ag, Inc. Rte. 1 County Hwy. 66A N St. Marys, OH 45885 419-394-8870 Robert E. Hirschfeld, pres.	Con-Ag, Inc. (10)	Auglaize	limestone	195,821	177,866	Ae-31	IM-744
Connolly Construction Co., Inc. 825 W. Sixth St. P.O. Box 271 Marysville, OH 43040 513-644-8831 Phillip F. Connolly, pres.	East Liberty Quarry (49)	Logan	limestone	178,478	178,478	Lgn-1	IM-574
Conotton Valley Quarries Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Conotton Valley Quarry (1)	Carroll	sandstone	[13]		Cl-102	IM-278
Copley Sand & Gravel Co. 8650 Brookpark Rd. Cleveland, OH 44129 216-351-1100 Joan Vivolo, pres.	Copley Sand & Gravel Co. (260)	Portage	sand & gravel	[13]		Pe-84	IM-868
County Line Sand & Gravel 659 W. County Line Rd. Springfield, OH 45502 513-399-9200 John W. Martin, Jr., owner	County Line Sand & Gravel (53)	Clark	sand & gravel	3,175	2,333	Ck-27	IM-549
Cox Gravel, Inc. P.O. Box 127 Dresden, OH 43821 614-754-2011 Richard Cox, pres.	Jennings (243) Prospect (244)	Muskingum Muskingum	sand & gravel sand & gravel	119,510 71,751	121,595 81,084	Mum-799 Mum-863	IM-264 IM-317
Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Dover Pit (13)	Belmont	limestone	45,757	52,052	Bt-119	IM-733
Crooksville Coal Co. P.O. Box 149 Crooksville, OH 43731 614-982-6651 Ralph L. Allen, pres.	Clark #1 (137)	Perry	limestone	[13]		Py-330	IM-898
R. A. Cruise Sand & Gravel, Inc. 7639 State Rte. 14 Ravenna, OH 44266 216-296-4087 Larry R. Cruise, pres.	R. A. Cruise Sand & Gravel, Inc. (261)	Portage	sand & gravel	64,714	64,714	Pe-45	IM-139

[13]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Cunningham Asphalt Paving, Inc. P.O. Box 202 Wheelersburg, OH 45694 614-574-6184 Karl Cunningham, pres.	Cunningham Pit (304)	Scioto	sand & gravel	[14]		So-83	IM-211
D & D Sand Bank Co. Rte. 7 Box 473 South Point, OH 45680 614-377-4765 Dale M. Pemberton, owner	D & D Sand Bank (388)	Lawrence	sand & gravel	7,644	7,644	Le-445	IM-928
D & J Energy, Inc. Rte. 1 Box 351 Bidwell, OH 45614 614-384-2614 David D. Roush, supt.	D & J Energy (46)	Jackson	limestone	[15]		Jkn-583	IM-894
D & W Gravel Co. 10677 Wren Rd. Mechanicsburg, OH 43044 513-834-3242 Dale Potter, owner	D & W Gravel (49)	Champaign	sand & gravel	[15]		Cpn-21	IM-616
J & J Davenport 923 McBurny Dr. Lebanon, OH 45036 513-932-2901 James V. Davenport, owner	J & J Davenport (356)	Warren	sand & gravel	[15]		Wan-47	IM-846
Davis Sand & Gravel 311 Mt. Zion Rd. SW Lancaster, OH 43130 614-687-1876 Richard P. Davis, owner	Davis Sand & Gravel (91)	Fairfield	sand & gravel	[15]		Fd-12	IM-451
Davon, Inc. 4281 Rousch Rd. Hillsboro, OH 45133 513-393-4211 John B. Patton, pres.	Plum Run Stone Division (1) Highland Stone Division (41)	Adams Highland	limestone limestone	1,204,105 557,355	1,381,913 539,097	Ads-1 Hd-2	IM-237 IM-230
Demmy Sand & Gravel 4324 Fairfield Pike Springfield, OH 45502 513-325-8840 Woodrow Demmy, owner	Demmy Sand & Gravel (54)	Clark	sand & gravel	15,741	15,741	Ck-502	IM-375
Dennis Clay Co. State Rte. 37 Box 10922 New Lexington, OH 43764 614-342-5269 Tom L. Dennis, owner	Corder Mine (74) Cannon Mine (43) Browning Mine (75) (75)	Muskingum Perry Perry	clay clay clay shale	12,906 6,268 618 35,640	12,906 6,268 700 27,080	Mum-D[16] Py-296 Py-331	IM-917 IM-37 IM-920
Diamond Crystal Salt Co. 2065 Manchester Rd. P.O. Box 149 Akron, OH 44309 216-745-0031 Alan B. Graf, pres.	Diamond Crystal Salt Co. (4)	Summit	salt	222,070	235,138	St-9127	
Diamond Stone Quarries, Inc. P.O. Box 66 Albany, OH 45710 614-698-2431 W. E. Engle, pres.	Plant No. 1 (8) Plant No. 2 (9)	Athens Athens	limestone limestone	62,453 83,956	53,980 50,610	As-532 As-533	IM-16, IM-597 IM-17
A. J. Diana Sons, Inc. 1916 Erie Ave. NW P.O. Box 488 Massillon, OH 44646 216-832-5904 Virgil V. Diana, pres.	Neidert Pit (320)	Stark	sand & gravel	19,361	17,073	Sk-694	IM-858
Dingledine Sand & Gravel 4560 Oxford-Trenton Rd. Oxford, OH 45056 513-523-4380 Gerald Dingledine, owner	Dingledine Sand & Gravel (32)	Butler	sand & gravel	[15]		Br-50	IM-739
Dinnen Sand & Gravel 1991 W. Jackson Rd. Yellow Springs, OH 45387 513-325-3610 Paul Dinnen, owner	Dinnen Sand & Gravel (55)	Clark	sand & gravel	[14]		Ck-501	IM-340

[14]No sales or production.
[15]No report filed in 1986.
[16]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Dravo Basic Materials Co., Inc. 5253 Wooster Rd. Cincinnati, OH 45226 513-321-2700 H. Donovan Ross, pres.	Fairfield Plant (33)	Butler	sand & gravel	2,728	0	Br-14	IM-147
	Ross Plant (34)	Butler	sand & gravel	469,397	574,489	Br-29	IM-149
	Cleves Plant (126)	Hamilton	sand & gravel	422,570	90,230	Hmn-3	IM-137, IM-801
	Camp Dennison Plant (127)	Hamilton	sand & gravel	432,968	469,460	Hmn-5	IM-148
	Newtown Plant (128)	Hamilton	sand & gravel	1,194,330	1,260,171	Hmn-11	IM-133
	Cleves Plant (129)	Hamilton	sand & gravel	60,655	13,865	Hmn-62	IM-691
	Cleves Plant (130)	Hamilton	sand & gravel	[17]		Hmn-64	IM-812, IM-821
	Cleves Plant (131)	Hamilton	sand & gravel	131,008	562,810	Hmn-68	IM-747
	Apple Grove Plant (209)	Meigs	sand & gravel	34,027	806,361	Ms-205	IM-30
	South Lebanon Plant (352)	Warren	sand & gravel	151,309	0	Wan-41	IM-629
Joe Dresbach Farms 2626 Higby Rd. Chillicothe, OH 45601 614-884-4944 Joe Dresbach, owner	Joe Dresbach Farms (296)	Ross	sand & gravel	[18]		Rs-12	IM-560
Dry Creek Gravel Co. 2097 Mt. Vernon Rd. Newark, OH 43055 614-366-3333 Gail J. Wolfe, pres.	Dry Creek Gravel Co. (175)	Licking	sand & gravel	46,000	0	Lg-7	IM-247
	Dry Creek Farms (176)	Licking	sand & gravel	101,000	105,000	Lg-31	IM-246
	Water Works Dam Dredging Project (400)	Licking	sand & gravel	16,500	16,500	Lg-502	IM-956
	Dry Creek Gravel Co. (177)	Licking	sand & gravel	24,800	28,800	Lg-DC[19]	IM-354
C. E. Duff & Son, Inc. 9042 State Rte. 117 P.O. Box 265 Huntsville, OH 43324 513-686-2488 James E. Duff, pres.	C. E. Duff & Son, Inc. (50)	Logan	limestone	212,514	181,226	Lgn-15	IM-453
	Duff Sand Co. (182)	Logan	sand & gravel	70,083	70,083	Lgn-31	IM-454
	C. E. Duff & Son, Inc. (183)	Logan	sand & gravel	[17]		Lgn-39	IM-887
Eagle City Sand & Gravel Co. 1015 Eagle City Rd. Springfield, OH 45502 513-399-0340 Hugh Beals, mgr.	Eagle City Sand & Gravel Co. (56)	Clark	sand & gravel	[18]		Ck-7	IM-449
East Ohio Limestone Co. P.O. Box 699 Hartville, OH 44632 216-877-2636 Donald D. Phillips, partner	East Ohio Limestone Co. (113)	Stark	limestone	129,324	129,324	Sk-663	IM-5
	(52)		clay	[17]			
Eaton Sand & Gravel, Inc. 1075 Eaton Dr. Covington, KY 41017 606-331-2303 Charles Bucklew, pres.	Eaton Sand & Gravel, Inc. (132)	Hamilton	sand & gravel	27,136	27,136	Hmn-46	IM-396
Eberhart Coal, Inc. 6406 Cleveland Ave. S East Sparta, OH 44626 216-484-4261 Phillip H. Eberhart, pres.	Eberhart #2 Hott Strip (61)	Tuscarawas	clay	7,429	7,429	Ts-1882	D-0013
Economy Sand Co. P.O. Box 754 Proctorville, OH 45669 614-886-6662 Dale Manns, owner	Economy Sand Co. (171)	Lawrence	sand & gravel	18,849	18,849	Le-441	
Eldean Gravel Co. 135 E. Main St. P.O. Box 440 Tipp City, OH 45371 513-667-4431 James Ernst, pres.	Eldean Gravel Co. (215)	Miami	sand & gravel	17,901	0	Mi-2	IM-367
Elm Spring Farm 938 State Rte. 207 Chillicothe, OH 45601 614-775-5525 Joanna J. Haskins, owner	Elm Spring Farm (297)	Ross	sand & gravel	4,900	4,900	Rs-26	
Embro, Inc. 8320 North State Rte. 123 Franklin, OH 45005 513-746-6121 Ronald V. Martz, pres.	Embro, Inc. (353)	Warren	sand & gravel	[18]		Wan-7	IM-151
Englewood Sand & Gravel Co., Inc. 501 E. Wenger Rd. P.O. Box 96 Englewood, OH 45322 513-836-5121 Denzil W. Wilson, pres.	Englewood Sand & Gravel (230)	Montgomery	sand & gravel	24,987	24,987	My-5	IM-600
	Englewood Sand & Gravel (392)	Montgomery	sand & gravel	31,735	31,735	My-64	IM-600

[17]No sales or production.
[18]No report filed in 1986.
[19]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Enon Washed Sand & Gravel Co. Div. of Hilltop Basic Resources 1665 Enon-Donnelsville Rd. P.O. Box 363 Enon, OH 45323 513-299-6058 Samuel E. Hagerman, v. pres.	Enon Washed Sand & Gravel (57)	Clark	sand & gravel	166,280	172,223	Ck-3	IM-463
M. T. Epling Co. 1725 Eastern Ave. Gallipolis, OH 45631 614-446-2742 M. T. Epling, pres.	Georges Creek Pit (105) M.T. Epling Sand & Gravel Plant (106)	Gallia Gallia	sand & gravel sand & gravel	[20] [20]		Ga-243 Ga-245	IM-238
Erie Blacktop, Inc. 4507 Tiffin Ave. P.O. Box 2308 Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Erie Blacktop, Inc. (24)	Erie	limestone	[20]		Ee-27	IM-608
Erie Sand & Gravel Co. Foot of Sassafras St. Erie, PA 16507 814-453-6721 Sidney E. Smith, Jr., pres.	Erie Sand & Gravel Co. (1)	Lake Erie	sand & gravel (dredged)	107,291	107,291		
Ernst Aggregates, Inc. 135 E. Main St. P.O. Box 440 Tipp City, OH 45371 513-667-4431 James Ernst, pres.	Bellbrook Gravel-Foreman Pit (111)	Greene	sand & gravel	[20]		Ge-25	
Ernst Gravel Co. P.O. Box 440 Tipp City, OH 45371 513-667-4431 James Ernst, pres.	Ernst Gravel Co. (216) Houston Pit (309)	Miami Shelby	sand & gravel sand & gravel	206,618 2,408	202,439 0	Mi-6 Shy-1	IM-356 IM-380
Don Evans Sand & Gravel 6578 Kilby Rd. Harrison, OH 45030 513-367-9530 Don Evans, owner	Don Evans Sand & Gravel (133) Don Evans Sand & Gravel (134)	Hamilton Hamilton	sand & gravel sand & gravel	[20] [20]		Hmn-65 Hmn-DE[21]	IM-736 IM-771
Fairfield Brick Co. P.O. Box 115 Zoarville, OH 44656-0115 216-859-2463 O. J. Buehler, pres.	Fairfield Brick Co. (62)	Tuscarawas	shale	[20]		Ts-527	IM-583
Fairfield Ready Mix 3292 Mack Rd. Fairfield, OH 45014 513-868-2400 Rex Allan, pres.	Fairfield Ready Mix (35) Fairfield Ready Mix (36)	Butler Butler	sand & gravel sand & gravel	[22] [22]		Br-49 Br-53	IM-403 IM-903
Feikert Sand & Gravel, Inc. 6971 County Rd. 189 Rte. 5 Box 365 Millersburg, OH 44654-9186 216-674-0038 Charles E. Feikert, pres.	Feikert Sand & Gravel, Inc. (154)	Holmes	sand & gravel	55,311	55,311	Hs-511	IM-345
Feitshans Gravel 4550 State Rte. 121 S Greenville, OH 45331 513-548-4982 Byron Feitshans, owner	Feitshans Gravel (79)	Darke	sand & gravel	[22]		Dke-7	
Ferris Coal Co., Inc. 371 South St. East Palestine, OH 44413 216-426-9680 Theresa Ferris, pres.	Ferris Coal Co., Inc. (4) (4) Ferris Coal Co., Inc. (65)	Columbiana Columbiana	clay shale sand & gravel	[22] [22] [22]		Ca-505 Ca-913	IM-13 IM-13
Fleckenstein Farm Gravel Pit 11251 State Rte. 66 Minster, OH 45865 513-295-2417 Ferd J. Fleckenstein, owner	Fleckenstein Farm Gravel Pit (310)	Shelby	sand & gravel	8,177	8,177	Shy-12	IM-528

[20]No sales or production.
[21]No mine number has been assigned by the Division of Mines.
[22]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Fleming Construction Co. P.O. Box 31 Marion, OH 43302 614-494-2476 Gerald E. Fleming, pres.	Fleming Construction Co. (197)	Marion	sand & gravel	[23]		Mn-16	IM-171
Flesher Sand & Gravel, Inc. 3322 Clark Mill Rd. Norton, OH 44203 216-745-9239 Dallas Flesher, owner	Flesher Sand & Gravel, Inc. (327)	Summit	sand & gravel	7,089	7,089	St-52	IM-900
Foureman's Sand & Gravel, Inc. 2791 Wildcat Rd. Greenville, OH 45331 513-548-1718 Gary B. Foureman, pres.	Foureman's Sand & Gravel, Inc. (80)	Darke	sand & gravel	44,824	41,018	Dke-4	IM-433
Fox Stone Products, Inc. P.O. Box 299 Put-in-Bay, OH 43456 419-285-3025 Richard H. Fox, pres.	Fox Stone Products, Inc. (81)	Ottawa	limestone	[24]		Oa-17	IM-635
The France Stone Co. P.O. Box 1928 Toledo, OH 43603 419-241-4101 Ollie J. Risner, pres.	Waterville (52)	Lucas	limestone	374,050	390,926	Ls-1	IM-575
	Silica (53)	Lucas	limestone	827,711	888,501	Ls-3	IM-580
	Paulding (86)	Paulding	limestone	235,594	314,359	Pg-7	
	Bellevue (100)	Sandusky	limestone	[23]		Sy-6	IM-346
	Flat Rock (107)	Seneca	limestone	1,405,945	1,579,916	Sa-1	IM-347
	Bloomville (108)	Seneca	limestone	403,466	449,616	Sa-3	IM-349
	North Baltimore (128)	Wood	limestone	[23]		Wd-2	IM-576
	Custar (129)	Wood	limestone	244,828	191,788	Wd-5	IM-473
Fredericktown Sand & Gravel Co. P.O. Box 112 Fredericktown, OH 43019 614-694-2096 R. R. Stander, pres.	Fredericktown Sand & Gravel Co. (159)	Knox	sand & gravel	190,970	230,934	Kx-13	IM-343
Frye Sand & Gravel, Inc. 3049 Denmark Rd. P.O. Box 3 Dorset, OH 44032 216-858-2627 Harold L. Frye, owner	Frye Sand & Gravel, Inc. (9)	Ashtabula	sand & gravel	1,683	1,683	Asa-10	IM-198
Fuhrer Farms & Mining 258 Ninth St. SW Strasburg, OH 44680 216-878-5256 Jack Fuhrer, partner	Fuhrer Farms & Mining (136)	Tuscarawas	limestone	2,811	2,811	Ts-1961	IM-845
Galion Materials Division of Wyandot Blacktop, Inc. 1465 N. Main St. P.O. Box 565 Marion, OH 43302 614-383-6343 Gerald W. Jury, pres.	Galion Materials (74)	Crawford	sand & gravel	[23]		Cd-4	IM-636
Ganges Gravel 153 North Gambel P.O. Box 42 Shelby, OH 44875 419-342-5361 J. J. Scott, owner	Ganges Gravel (289)	Richland	sand & gravel	[24]		Rd-18	IM-670
John L. Garber Materials, Inc. R.R. 8 Box 246 Lexington, OH 44904 419-884-1567 John L. Garber, pres.	J. L. Garber Materials, Inc. (290)	Richland	sand & gravel	287,354	231,250	Rd-14	IM-436
General Clay Products Corp. P.O. Box 236 Baltic, OH 43804-0236 216-897-7171 Harold B. Epler, Jr., pres.	Drescher Pit (6)	Coshocton	clay	[23]		Cn-787	IM-610
	(6)		shale	26,278	26,278		
	Troyer Pit (18)	Holmes	shale	532	532	Hs-77	IM-545
General Clay Products Corp. P.O. Box 550 Logan, OH 43138 614-385-5616 Harold B. Epler, Jr., pres.	General Clay Products Corp. (12)	Hocking	clay	27,685	27,685	Hg-205	IM-21
	(12)		shale	23,404	23,404		

[23]No sales or production.
[24]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
General Clay Products Corp. 9866 Mt. Eaton Rd. P.O. Box 340 Wadsworth, OH 44281 216-335-1515 Harold B. Epler, Jr., pres.	General Clay Products Corp. (37) (37)	Medina	clay shale	560 62,079	560 62,079	Ma-6	IM-455
General Portland, Inc. Peninsular Portland Cement Div. P.O. Box 160 Paulding, OH 45879 419-399-4861 Bertrand Collomb, pres.	Paulding Quarry (87) (42)	Paulding	limestone clay	588,018 167,764	588,018 167,764	Pg-1	IM-513
Gerken Materials, Inc. P.O. Box 607 Napoleon, OH 45345 419-533-2421 Julian A. Gerken, pres.	Gerken Materials, Inc. (147)	Henry	sand & gravel	17,867	149,900	Hy-5	
Gibson Sand & Gravel Co. 1385 Knorr Rd. Galion, OH 44833 419-468-5527 Arthur T. Gibson, owner	Gibson Sand & Gravel (75)	Crawford	sand & gravel	2,475	2,475	Cd-3	IM-693
C. R. Gill Construction 204 Bertha Ave. Clyde, OH 43410 419-547-9840 C. R. Gill, owner	C. R. Gill Construction (301)	Sandusky	sand & gravel	[25]		Sy-21	IM-633
Glen-Gery Corp. 5692 Rinker Rd. P.O. Box 398 Caledonia, OH 43314 419-845-3321 Richard Boxall, pres.	Glen-Gery Corp. (36)	Marion	shale	95,931	95,931	Mn-7	IM-309
Gary Golsch 2 Church St. Addyston, OH 45001 Gary Golsch, owner	Gary Golsch (145)	Hamilton	sand & gravel	[25]		Hmn-49	IM-176
Goodwin Sand & Gravel, Inc. 126 S. Norton St. Mt. Vernon, OH 43050 614-392-7971 Don E. Mill, pres.	Goodwin Sand & Gravel, Inc. (160)	Knox	sand & gravel	65,100	79,000	Kx-7	IM-235
Gottron Bros. Co. 100 South Stone St. Fremont, Oh 43420 419-332-5281 Thomas R. Gottron, pres.	Gottron Bros. Co. (101)	Sandusky	limestone	34,505	45,000	Sy-5	IM-259
The Gravel Co. 325 Clark Rd. P.O. Box 15501 Cincinnati, OH 45215 513-761-0326 Roy B. Schweitzer, owner	The Gravel Co. (63)	Clinton	sand & gravel	[26]		Cln-10	IM-638
Gregory Materials Co. 14133 U.S. Rte. 23 N Waverly, OH 45690 614-947-5559 Ernest Gregory, pres.	Plant #1 (254)	Pike	sand & gravel	1,872	1,872	Pke-30	IM-786
Gregory Stone, Inc. 3244 S. Davis Rd. Ludlow Falls, OH 45339 513-275-7455 William T. Gregory, Jr., pres.	Gregory Quarry (65)	Miami	limestone	3,906	3,906	Mi-16	IM-414
H. T. Griffin Excavating Rte. 5 Box 228 Swanton, OH 43558 419-825-5955 Henry T. Griffin, owner	H.T. Griffin Excavating (192)	Lucas	sand & gravel	[25]		Ls-19	IM-622
Groves Gravel Co. 2068 N. Troy Rd. Bellefontaine, OH 43311 513-592-6765 Robert W. Groves, Jr., owner	Groves Gravel (184)	Logan	sand & gravel	[25]		Lgn-36	IM-581

[25]No report filed in 1986.
[26]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Guernsey Limestone Co., Inc. P.O. Box 652 Marietta, OH 45750 614-373-4929 William H. Calvin, owner	Guernsey Limestone Co., Inc. (126)	Washington	limestone	300	0	Wn-47	IM-62
Gwin Contracting Co. P.O. Box 205 Columbiana, OH 44408 216-482-2442 Lyle D. Gwin, pres.	Gwin Contracting Co. (30)	Mahoning	sandstone	42,124	42,124	Mg-62	IM-599
H & H Utilities Co. 7307 S. Kessler-Frederick Rd. West Milton, OH 45383 513-223-6752 Gerald Hockwalt, pres.	H & H Gravel (229)	Montgomery	sand & gravel	14,874	14,875	My-68	IM-646
H & M Sand & Gravel Co. 1022 Blanchard Ave. P.O. Box 497 Findlay, OH 45840 419-422-5923 Ivan D. Hobbs, pres.	H & M Sand & Gravel Co. (380) H & M Sand & Gravel Co. (380) H & M Sand & Gravel Co. (381)	Wyandot Wyandot Wyandot	sand & gravel sand & gravel sand & gravel	181,094 0 [27]	132,654 48,440	Wt-5 Wt-15 Wt-18	IM-376 IM-376 IM-551
Haas Gravel Co. 405 E. Wenger Rd. Englewood, OH 45332 513-836-5603 Harold H. Haas, owner	Haas Gravel Co. (231)	Montgomery	sand & gravel	2,060	2,060	My-30	IM-496
J. M. Hamilton & Sons Co. 1974 Marion-Bucyrus Rd. Marion, OH 43302 614-382-2189 O. E. Hamilton, pres.	J. M. Hamilton & Sons Co. (59)	Marion	limestone	86,836	86,836	Mn-2	IM-423
Hammer Clay Co., Inc. 12398 Old Rainer Rd. Roseville, OH 43777 614-697-7030 Glenn E. Hammer, pres.	Hammer Clay Co., Inc. (40)	Muskingum	clay	1,508	1,508	Mum-848	IM-748
Hard Rocks, Inc. 9340 State Rte. 5 NE Kinsman, OH 44428 216-876-1565 Dan White, pres.	Hard Rocks, Inc. (40)	Trumbull	sandstone	59,421	62,421	Tl-13	IM-777
Hardin Quarry Co., Inc. 12484 State Rte. 701 Kenton, OH 43326 419-675-1327 Richard Pees, pres.	Hardin Quarry Co., Inc. (38)	Hardin	limestone	100,630	100,630	Hdn-2	IM-443
Harris Excavating Co. R.D. 1 State Rte. 113 Berlin Heights, OH 44814-9101 419-588-2518 Warren & Monty Harris, partners	Harris Excavating Co. (15)	Erie	sandstone	[28]		Ee-15	IM-708
Harrison Sand & Gravel Co. 10980 Campbell Rd. Harrison, OH 45030 513-655-2174 Norman A. Wanstrath, pres.	Harrison Sand & Gravel Co. (135)	Hamilton	sand & gravel	58,398	58,398	Hmn-17	IM-295
Hartville Sand & Gravel, Inc. P.O. Box 1009 Hartville, OH 44632 216-877-9613 William H. Leach, Sr., pres.	Hartville Sand & Gravel (321)	Stark	sand & gravel	36,404	26,948	Sk-182	IM-67
Haubeil & Sons Asphalt & Materials, Inc. 691 Marietta Pike Chillicothe, OH 45601 614-773-6358 Robert & George Haubeil, co-owners	Haubeil & Sons (298)	Ross	sand & gravel	50,373	50,373	Rs-24	IM-735
Haueter Sand & Gravel Co. P.O. Box 206 Chardon, OH 44024 216-286-9482 Donald Haueter, pres.	Haueter Sand & Gravel Co. (108)	Geauga	sand & gravel	321,368	321,368	Gea-29	IM-215

[27]No sales or production.
[28]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Heiser Sand & Gravel P.O. Box 2491 North Canton, OH 44720 216-499-8201 Richard L. Heiser, owner	Heiser Sand & Gravel (322) Heiser Sand & Gravel (323)	Stark Stark	sand & gravel sand & gravel	20,996 62,042	20,996 59,377	Sk-206 Sk-688	IM-715 IM-763
Heiser Stone Co. P.O. Box 2491 North Canton, OH 44720 216-499-8201 Richard L. Heiser, owner	Heiser Stone Co. (55) Heiser Stone Co. (397)	Mahoning Tuscarawas	limestone sand & gravel	14,408 [29]	2,070	Mg-43 Ts-1977	IM-723 IM-692
Hillsdale Sand & Gravel, Inc. P.O. Box 223 Archbold, OH 43502 419-445-1015 Dean Miller, pres.	Hillsdale Sand & Gravel, Inc. (82)	Defiance	sand & gravel	15,400	11,546	De-2	IM-765
Hilltop Aggregate, Inc. P.O. Box 362 Mogadore, OH 44260 216-628-9992 Robert W. West, pres.	Hilltop Aggregate, Inc. (262)	Portage	sand & gravel	266,458	266,458	Pe-56	IM-127
Hilltop Basic Resources, Inc. 630 Vine St. Cincinnati, OH 45202 513-299-6058 Thomas D. Harrington, pres.	Fairborn Aggregate Plant (112) West Carrollton Aggregate Plant (232)	Clark, Greene Montgomery	sand & gravel sand & gravel	394,054 557,819	449,926 531,357	Ge-4 My-19	IM-394 IM-390
Hocking County Engineer 1 East Main St. Court House Logan, OH 43138 614-385-8545 William R. Shaw, county engineer	Hocking Co. Gravel Pit (150)	Hocking	sand & gravel	8,475	8,475	Hg-296	IM-559
Hocking Valley Concrete, Inc. 35255 Hocking Dr. Logan, OH 43138 614-385-2165 William G. Vaughn, pres.	Hocking Valley Concrete (151)	Hocking	sand & gravel	32,389	34,400	Hg-262	IM-41
Hollinger Gravel Plant 1977 Royer Rd. New Madison, OH 45346 513-996-6367 Raymond S. Hollinger, owner	Hollinger Gravel Plant (81)	Darke	sand & gravel	2,862	2,862	Dke-10	IM-326
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-893-2721 Emanuel E. Mullet, pres.	241 Plant (44) (19) Wayne Mine (45) Bolivar Mine (76)	Holmes Holmes, Wayne Stark	limestone clay limestone clay	89,724 68,152 138,093 3,340	100,012 71,939 168,275 3,340	Hs-67 Hs-79 Sk-235	IM-768 IM-656 IM-945
Honey Creek Stone Co. P.O. Box 286 Petersburg, OH 44454 216-542-2372 D. B. Carson, pres.	Honey Creek Stone Co. (56)	Mahoning	limestone	164,976	198,600	Mg-54	IM-93
Hornsby Sand & Gravel Co. 7450 Dryfork Rd. Cleves, OH 45002 513-367-6101 Eric Hornsby, pres.	Hornsby Sand & Gravel Co. (136) Hornsby Sand & Gravel Co. (354) Hornsby Sand & Gravel Co. (355)	Hamilton Warren Warren	sand & gravel sand & gravel sand & gravel	113,516 [30] [30]	113,516	Hmn-45 Wan-46 Wan-H	IM-314 IM-679 IM-842
Howerton Supply Co. State Rte. 133 Felicity, OH 45120 513-421-0555 David W. Howerton, pres.	Howerton Supply Co. (60)	Clermont	sand & gravel	[30]		Ct-12	IM-648
Lewis Huck Rte. 3 McConnelsville, OH 43756 614-962-3467 Lewis E. Huck, partner	Huck Farm (241)	Morgan	sand & gravel	[29]		Mon-599	
Warner L. Hughes, Inc. 2375 Waterloo Rd. Suffield, OH 44261 216-628-9916 Warner L. Hughes, pres.	Hughes Pit (263)	Portage	sand & gravel	1,642	1,642	Pe-76	IM-678

[29]No sales or production.
[30]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Hugo Sand Co. 7055 State Rte. 43 Kent, OH 44240 216-673-4710 Dorothy M. Strohm, pres.	Hugo Sand Co. (264)	Portage	sand & gravel	123,106	123,106	Pe-10	IM-138
Humphrey Farms P.O. Box 128 Reedsville, OH 45772-0128 614-378-6295 C. Ed Humphrey, owner	Vivian Humphrey (210)	Meigs	sand & gravel	200	200	Ms-295	
Hydraulic Press Brick Co. P.O. Box 31330 Independence, OH 44131 314-621-9306 W. W. Allen, Jr., pres.	Hydraulic Press Brick Co. (7)	Cuyahoga	shale	174,066	160,716	Cya-19	IM-95
Indian Creek Sand & Gravel Co. 2870 Oxford-Millville Rd. P.O. Box 330 Oxford, OH 45056 513-523-2397 Gaston Bowling, pres.	Indian Creek Sand & Gravel Co. (37)	Butler	sand & gravel	3,195	3,195	Br-40	IM-493
International Salt Co. P.O. Box 6920 Cleveland, OH 44101 216-651-7200 John L. Ryon, Jr., pres.	Cleveland Mine (1)	Cuyahoga	salt	1,921,248	2,204,161	Cya-30	
J. P. Sand & Gravel Co. 5911 Lockbourne Rd. P.O. Box 2 Lockbourne, OH 43137 614-497-0083 Richard A. Roberts, pres.	J. P. Sand & Gravel Co. (98)	Franklin	sand & gravel	507,248	507,248	Fn-52	IM-191
Jackie Lee Enterprises, Inc. 800 W. Waterloo Rd. Akron, OH 44314 216-753-4531 Jackie Lee Tisci, pres.	Minor Rd. Plant (328)	Summit	sand & gravel	[31]		St-39	IM-130
Janson's Soil Service 1492 Mechanicsville Rd. Rock Creek, OH 44084 216-466-3835 Peter E. Janson, Jr., owner	Janson's Soil Service (10)	Ashtabula	sand & gravel	2,557	2,557	Asa-14	IM-563
Jarrett Sand Co. 6505 Skadden Rd. Sandusky, OH 44870 419-359-1750 James Jarrett, owner	Jarrett Sand Co. (84)	Erie	sand & gravel	3,143	3,143	Ee-29	
Jefferson Materials Co. 8505 State Rte. 14 Kent, OH 44240 216-626-3816 John E. Lower, pres.	Howitt (265)	Portage	sand & gravel	171,237	201,876	Pe-63	IM-82
Johnson Gravel Co. U.S. Rte. 68 South P.O. Box 122 Bellefontaine, OH 43311 513-592-2075 Paul R. Drumm, pres.	Johnson Gravel Co. (185)	Logan	sand & gravel	[32]		Lgn-26	IM-429
Jones Trucking Co. 987 County Rd. 175 Polk, OH 44866 419-869-7290 Wayne Jones, owner	Jones Trucking Co. (4)	Ashland	sand & gravel	[32]		Ald-10	IM-558
Joseph Sand & Gravel Rte. 6 Boundary Rd. Wapakoneta, OH 45895 419-568-3787 Mary J. Joseph, owner	Joseph Sand & Gravel (23)	Auglaize	sand & gravel	3,910	0	Ae-23	IM-508
Kalo, Inc. 1145 Chesapeake Ave. P.O. Box 12567 Columbus, OH 43212-0567 614-488-0736 Jere Wise, pres.	Kalo, Inc. Humus Plant (5)	Wyandot	peat	692	136	Wt-14	

[31]No sales or production.
[32]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
John W. Karch Stone Co. P.O. Box 357 Celina, OH 45822 419-586-2335 George E. Karch, pres.	John W. Karch Stone Co. (62)	Mercer	limestone	469,379	469,379	Mr-1	IM-592
Karg Sand & Gravel Co. 963 Tallmadge Rd. Kent, OH 44240 216-673-1338 Richard G. Karg, owner	Karg Sand & Gravel Co. (267) Karg Sand & Gravel Co. (266)	Portage Portage	sand & gravel sand & gravel	37,400 [33]	37,400	Pe-77 Pe-83	IM-730 IM-179
Keener Sand & Clay Co. 330 Dering Ave. Columbus, OH 43207 614-444-1105 Carl F. Weiffenbach, pres.	Huron Plant (85) Gallia Plant (107)	Erie Gallia	sand & gravel sand & gravel	2,243 1,484	2,243 1,484	Ee-5 Ga-507	IM-23
Alvin Keiffer Trucking & Excavating 296 State Rte. 604 Polk, OH 44866 419-869-7238 Alvin Keiffer, owner	Dinsmore Pit (5)	Ashland	sand & gravel	5,039	5,039	Ald-12	IM-579
Kimble Clay & Limestone Co. R.D. 1 Box 386 Dover, OH 44622 216-343-1226 Floyd E. Kimble, owner	Kimble Limestone (117) (41) (63) (63)	Tuscarawas	limestone sandstone clay shale	64,352 134,521 38,783 263,564	64,352 134,521 38,783 263,564	Ts-1818	IM-9
King Limestone, Inc. 11300 State Rte. 340 Cumberland, OH 43732 614-638-3942 Duane King, pres.	King Limestone, Inc. (79)	Noble	limestone	132,833	132,833	Ne-106	IM-85
Kinsman Sand & Gravel Co. 9443 State Rd. Kinsman, OH 44428 216-876-3321 Glenn B. Harnett, pres.	Kinsman Sand & Gravel Co. (11)	Ashtabula	sand & gravel	103,516	122,222	Asa-K[34]	IM-886
Kipp's Gravel Co., Inc. 4987 State Rte. 222 Batavia, OH 45103 513-732-1024 Melvin M. Kipp, pres.	Kipp's Gravel Co., Inc. (61)	Clermont	sand & gravel	69,336	69,336	Ct-7	IM-432
Kirby's Sand & Gravel, Inc. 4876 Twp. Hwy. 43 Rte. 4 Upper Sandusky, OH 43351 419-927-2260 Noble A. Kirby, owner	Kirby's Sand & Gravel (382)	Wyandot	sand & gravel	13,884	13,884	Wt-17	IM-604
Kishler Coal & Clay Co. P.O. Box 216 Junction City, OH 43748 614-385-5371 Charles L. Kishler, owner	Kishler Coal & Clay Co. (13) (13) Kishler Coal & Clay Co. (14) (14) Kishler Coal & Clay Co. (45) (45) Kishler Coal & Clay Co. (44) (44)	Hocking Hocking Perry Perry 	clay shale clay shale clay shale clay shale	[35] [35] [35] [35] [35] [35] [35] [35]		Hg-256 Hg-K[34] Py-297 Py-K[34] 	IM-764 IM-816 IM-850 IM-20
Doug Kneedler 1630 Cherry Lane Findlay, OH 45840 419-423-9988 Doug Kneedler, owner	Doug Kneedler (186) Doug Kneedler (187)	Logan Logan	sand & gravel sand & gravel	[35] [35]		Lgn-37 Lgn-DK[34]	IM-892 IM-880
Kohl Industries Rte. 4 Box 4070 New Philadelphia, OH 44663 216-874-4748 Jerry K. Kohl, owner	Black Hawk (114) (2) (53) (53)	Stark	limestone sandstone clay shale	1,540 12,680 40,762 399	1,540 12,680 40,762 399	Sk-217	IM-750
Kokosing Materials, Inc. P.O. Box 122 Fredericktown, OH 43019 614-694-0616 Gordon Dean Rinehart, pres.	KMI #1 (161)	Knox	sand & gravel	133,006	177,678	Kx-16	IM-793
Konik Excavating 120 Liberty Ave. P.O. Box 39 Vermilion, OH 44089 216-967-7158 Gertrude Finnegan, owner	Finnegan Sandstone, Inc. (28)	Lorain	sandstone	[33]		Ln-11	IM-555

[33]No sales or production.
[34]No mine number has been assigned by the Division of Mines.
[35]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Koontz Sandstone Co. P.O. Box 496 Wadsworth, OH 44281 216-336-3630 Bruce C. Koontz, pres.	Koontz Sandstone Co. (29)	Medina	sandstone	[36]		Ma-21	IM-291
Edward Kraemer & Sons, Inc. Bolander Rd. Clay Center, OH 43408 419-855-8388 David R. Kraemer, pres.	White Rock Quarry (82)	Ottawa	limestone	1,142,119	1,322,899	Oa-6	IM-296
L & I Trucking & Construction, Inc. 1842 Adams Rd. Loveland, OH 45140 513-683-2045 Alvin Walker, pres.	L & I Trucking & Construction, Inc. (357)	Warren	sand & gravel	79,272	38,930	Wan-8	IM-240
L & M Excavators, Inc. 2191 Snouffer Rd. Worthington, OH 43085 614-885-7897 Charles L. Lewis, pres.	Westerville Industrial Park (99)	Franklin	sand & gravel	32,663	32,663	Fn-54	IM-847
L & M Minerals, Inc. P.O. Box 54 Millersburg, OH 44654 216-893-2227 Emanuel E. Mullet, pres.	Evans (64) (64) Luikert (65) L & M Minerals, Inc. (66)	Tuscarawas Tuscarawas Tuscarawas	clay shale clay shale	47,729 64,324 [37] [36]	47,729 64,324	Ts-1884 Ts-1914 Ts-1944	IM-6 IM-741 IM-621
Lake Hope Asphalt, Inc. State Rte. 278 P.O. Box 38 Nelsonville, OH 45764 614-753-1005 Francis F. Efaw, pres.	Lake Hope Asphalt, Inc. (21)	Athens	sand & gravel	32,029	34,166	As-1161	IM-97
Lakeside Sand & Gravel Co. 3431 Frost Rd. Mantua, OH 44255 216-274-2569 Larry & Henry Kotkowski, partners	Lakeside Sand & Gravel (268)	Portage	sand & gravel	161,362	156,427	Pe-40	IM-190
Lancaster Sand & Gravel Co. 3232 Logan-Lancaster Rd. Lancaster, OH 43130 614-246-6315 Don E. Mill, pres.	Lancaster Sand & Gravel Co. (92)	Fairfield	sand & gravel	242,000	274,000	Fd-13	IM-848
Lappin's Farm 4309 Newcomer Rd. Kent, OH 44240 216-673-5016 Harley G. Lappin, owner	Lappin's Farm (269)	Portage	sand & gravel	[37]		Pe-82	IM-452
Latham Limestone, Inc. P.O. Box 77 Latham, OH 45646 614-493-2677 Robert Murray, pres.	Latham Limestone, Inc. (91)	Pike	limestone	281,154	194,224	Pke-13	IM-213
Lazy Acre Farms, Inc. 1030 Forest Ave. Zanesville, OH 43701 614-453-1003 Clarence M. Parsons, owner	Lazy Acre Farms, Inc. (396)	Muskingum	sand & gravel	775	1,850	Mum-261	IM-957
Bertha A. Leonard 6539 River Rd. Harrison, OH 45030 513-738-4194 Bertha A. Leonard, owner	Bertha A. Leonard (137)	Hamilton	sand & gravel	[37]		Hmn-67	IM-529
Lerkis Asphalt Co., Inc. 550 Dan St. Akron, OH 44310 216-376-7560 Gus J. Lerkis, pres.	Lerkis Asphalt Co., Inc. (329)	Summit	sand & gravel	[37]		St-49	IM-159
Kenneth Leupp Gravel R.D. 1 Box 79 Archbold, OH 43502 419-445-2122 Kenneth W. Leupp, owner	Kenneth Leupp Gravel (103)	Fulton	sand & gravel	[37]		Ftn-2	

[36]No report filed in 1986.
[37]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Lingvai Peat Co. R.R. 2 Box 107 Edgerton, OH 43517 419-298-2058 Ronald Lingvai, owner	Lingvai Peat Co. (4)	Williams	peat	397	0	Ws-17	
W. G. Lockhart & Sons 7778 Manchester Ave. Canal Fulton, OH 44614 216-854-2251 A. R. Lockhart, pres.	Lockhart (270)	Portage	sand & gravel	[38]		Pe-WGL[39]	IM-568
London Tile Co. P.O. Box 31 New London, OH 44851 419-929-1551 R. N. Danison, pres.	London Tile Co. (1)	Ashland	clay	[40]		Ald-1	IM-334
Lone Star-Marquette P.O. Box 8 Pedro, OH 45659-0008 614-532-4163 John B. Baines, pres.	Bear Run (30)	Lawrence	shale	52,625	52,625	Le-308	IM-31
Lucky Sand & Gravel Co. 12018 Frost Rd. Mantua, OH 44255 216-562-6196 Bernard Udelson, pres.	Lucky Sand & Gravel Co. (271)	Portage	sand & gravel	[38]		Pe-75	IM-154
Ludlow Stone, Inc. 3244 S. Davis Rd. Ludlow Falls, OH 45339 513-698-3043 Lloyd B. Fry, pres.	Ludlow Stone, Inc. (66)	Miami	limestone	255,060	355,180	Mi-502	IM-414
Ludowici Celadon Co. P.O. Box 69 New Lexington, OH 43764 614-342-1995 Ed Ryser, pres.	Donnelly Pit (46)	Perry	shale	[40]		Py-212	IM-58
MacRitchie Materials, Inc. P.O. Box 90 West Millgrove, OH 43467 419-288-2790 Donald B. MacRitchie, pres.	MacRitchie Materials, Inc. (130)	Wood	limestone	204,728	268,796	Wd-1	IM-548
Marshall Quarry, Inc. 11199 State Rte. 124 Hillsboro, OH 45133 614-466-2560 Ronald M. Main, pres.	Marshall Quarry, Inc. (43)	Highland	limestone	6,484	6,484	Hd-4	IM-406
Martin Farms, Inc. 2993 Woodsdale Rd. Trenton, OH 45067 513-988-6318 James E. Martin, pres.	Martin Farms, Inc. (38)	Butler	sand & gravel	102,068	79,472	Br-52	IM-814
Martin Marietta Chemicals Executive Plaza II Hunt Valley, MD 21030 301-667-0200 W. W. Appel, pres.	Woodville Quarry (102)	Sandusky	limestone	1,672,488	1,672,488	Sy-1	IM-537
Masons Sand & Gravel Co. 2385 Rathmell Rd. Columbus, OH 43207 614-491-3611 Gordon Masteller, pres.	Masons Sand & Gravel (100)	Franklin	sand & gravel	50,559	50,559	Fn-11	IM-234
Massillon Washed Gravel Co. 6331 Blough Ave. SW P.O. Box 167 Navarre, OH 44662 216-879-2132 Thomas E. Thomas, pres.	Massillon Washed Gravel Co. (325)	Stark	sand & gravel	268,479	241,344	Sk-607	IM-102
Maumee Haulers, Inc. 8647 Nebraska Ave. Toledo, OH 43617 419-865-5013 Ike Parker, Jr., pres.	Nebraska Pit (193)	Lucas	sand & gravel	257,645	257,645	Ls-20	IM-888

[38]No report filed in 1986.
[39]No mine number has been assigned by the Division of Mines.
[40]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Maxville Stone Co. 7957 State Rte. 668 S Logan, OH 43138 614-596-5221 W. E. Engle, pres.	Maxville Stone Co. (89)	Perry	limestone	88,482	86,482	Py-235	IM-11, IM-515
McCarthy Stone Quarry 6326 County Rd. 61 Upper Sandusky, OH 43351 419-294-2611 Charles H. McCarthy, owner	McCarthy Stone Quarry (133)	Wyandot	limestone	102,919	102,919	Wt-3	IM-298
Meade Materials R.D. 1 Box 276 Jefferson, OH 44047 216-969-1193 James L. Meade, owner	Meade Materials (12)	Ashtabula	sand & gravel	[41]		Asa-8	IM-135
Mecco, Inc. 2504 S. Main St. Middletown, OH 45042 513-422-3651 David T. Morgan, pres.	Mecco, Inc. (39)	Butler	sand & gravel	53,902	53,902	Br-15	IM-316
Mechanicsburg Sand & Gravel, Inc. P.O. Box 18 Mechanicsburg, OH 43044 513-834-2606 John D. Cushman, pres.	Mechanicsburg Sand & Gravel, Inc. (50)	Champaign	sand & gravel	358,573	358,573	Cpn-22	IM-889
Meigs County Commissioners Rte. 2 Rocksprings Rd. Pomeroy, OH 45769 614-992-2911 Henry Wells, county commissioner	Meigs County Pit (211)	Meigs	sand & gravel	30,750	30,750	Ms-301	IM-619
Melvin Stone Co. 228 Melvin Rd. Wilmington, OH 45177 513-584-2486 Craig Beam, pres.	Melvin Stone Co. (17) Melvin Stone Co. (28) Melvin Stone Co. (92)	Clinton Fayette Pickaway	limestone limestone limestone	391,833 27,986 102,849	378,205 93,930 63,302	Cln-1 Fe-1 Pky-4	IM-241 IM-831 IM-209
Mesenburg Bros., Inc. R.D. 1 Collins, OH 44826 419-668-5691 Peter J. Mesenburg, pres.	Mesenburg Bros., Inc. (86) Mesenburg Bros., Inc. (20)	Erie Huron	sand & gravel sandstone	22,482 57,121	22,482 57,121	Ee-24 Hrn-8	IM-593 IM-268
Miami River Stone Co. 1556 Miami River Rd. Sidney, OH 45365 513-492-5412 Samuel J. Milligan, pres.	Miami River Stone Co. (110) Miami River Stone Co. (311)	Shelby Shelby	limestone sand & gravel	260,278 [41]	205,037	Shy-6 Shy-17	IM-389 IM-389
Mickley Gravel Co. P.O. Box J Danville, OH 43014 614-599-7870 Paul A. Mickley, owner	Mickley Gravel Co. (162) (139)	Knox	sand & gravel limestone	2,818 2,290	0 0	Kx-5	IM-884
Middletown Sand & Gravel Co. P.O. Box 380 Middletown, OH 45042 513-422-3781 Joseph M. Stevens, v. pres.	Middletown Sand & Gravel Co. (40)	Butler	sand & gravel	125,980	125,980	Br-1	IM-180
Miller Bros. Clay Works, Inc. Lock Box 162 Ottoville, OH 45876 419-453-3545 Kenneth A. Miller, owner	Miller Bros. Clay Works, Inc. (48)	Putnam	clay	[42]		Pm-9	
Miller Bros. Gravel, Inc. 7900 S. Kessler-Frederick Rd. Tipp City, OH 45371 513-836-0981 Thomas O. Miller, owner	Miller Bros. Gravel, Inc. (233)	Montgomery	sand & gravel	123,540	111,951	My-52	IM-348
H. M. Miller Construction Co. 1225 Waterloo Rd. Mogadore, OH 44260 216-628-4811 J. C. Smith, pres.	Krumroy Pit (330)	Summit	sand & gravel	22,722	22,722	St-46	IM-557

[41]No report filed in 1986.
[42]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Miller Sand & Gravel Co. State Rte. 82 Box 60 Windham, OH 44288 216-326-3157 Donald M. Miller, owner	Miller Sand & Gravel (272)	Portage	sand & gravel	4,378	4,378	Pe-39	IM-174
Miller Sand Co. 4615 Bellevue-Castalia Rd. Castalia, OH 44824 419-684-7180 Todd C. Miller, owner	Miller Sand Co. (87)	Erie	sand & gravel	5,019	5,019	Ee-28	IM-601
Mineral Research & Recovery of Ohio, Inc. #60 4500 East Speedway Tucson, AZ 85712 Don E. Byron, pres.	Mineral Research & Recovery of Ohio, Inc. (21)	Jackson	sandstone	[43]		Jkn-1018	IM-38
Mohican Materials Co. P.O. Box 1321 Mansfield, OH 44901 419-522-2521 Richard R. Stander, Sr., pres.	Mohican Materials Co. (291)	Richland	sand & gravel	1,451	1,451	Rd-10	IM-469
Mohican Organic Products, Inc. Rte. 1 47 Milligan Rd. Lucas, OH 44843 419-892-2212 Joyce C. Amos, pres.	Mohican Pit (1)	Ashland	peat	[44]		Ald-13	
Mohican Sand & Gravel, Inc. P.O. Box 28 Perrysville, OH 44864 419-522-2521 Richard R. Stander, Sr., pres.	Mohican Sand & Gravel, Inc. (292)	Richland	sand & gravel	126,945	126,945	Rd-5	IM-674
Montgomery Sand Co. Rte. 1 Plymouth, OH 44865 419-687-5081 Carl E. Montgomery, owner	Montgomery Sand Co. (156)	Huron	sand & gravel	[43]		Hrn-9	
Moore's Excavating Co. 2222 N. State Rte. 68 Urbana, OH 43078 513-653-6288 Ralph Moore, owner	Moore's Excavating Co. (51)	Champaign	sand & gravel	57,198	46,398	Cpn-20	IM-482
Moorman Sand & Gravel Co. 6127 Germantown Rd. P.O. Box 422 Middletown, OH 45042 513-424-1243 E. B. Moorman, pres.	Moorman Sand & Gravel Co. (41)	Butler	sand & gravel	33,535	0	Br-6[45]	IM-177, IM-181
Moraine Materials, Inc. 2500 East River Rd. Dayton, OH 45439 513-298-4371 John H. Pearce, pres.	Moraine Materials, Inc. (113) Moraine Materials, Inc. (114) Moraine Materials, Inc. (234) Moraine Materials, Inc. (358)	Greene Greene Montgomery Warren	sand & gravel sand & gravel sand & gravel sand & gravel	[44] 29,986 [44] [44]	 36,415 	Ge-32 Ge-38 My-29 Wan-6	IM-400 IM-333 IM-399 IM-254
Morrow Gravel Co. 11641 Mosteller Rd. P.O. Box 41350 Cincinnati, OH 45241 513-771-0870 John C. Jurgensen, pres.	Morrow Gravel Co. (359) Morrow Gravel Co. (360) Morrow Gravel Co. (361)	Warren Warren Warren	sand & gravel sand & gravel sand & gravel	[46] 211,622 [46]	 211,622 	Wan-14 Wan-44 Wan-MG[47]	IM-852 IM-165, IM-728 IM-837
Morton Thiokol, Inc. Morton Salt Division P.O. Box 390 Painesville, OH 44077-0390 216-354-9901 John J. Harkins, mgr.	Fairport Mine (2)	Lake	salt	1,280,532	1,427,369	Lke-6	
Morton Thiokol, Inc. Morton Salt Division 151 S. Industrial St. Rittman, OH 44270-1593 216-925-3015 Charles S. Locke, CEO	Morton Salt Well Field (5)	Wayne	salt	455,071	469,826	We-9129	

[43]No report filed in 1986.
[44]No sales or production.
[45]This mine was operated 1st and 2nd quarters 1986 by Moorman Sand & Gravel Co. and 3rd and 4th quarters by Weidle Sand & Gravel, Inc.
[46]All sales and production are reported under Wan-44.
[47]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Muskingum River Gravel Co. P.O. Box 14 Lockbourne, OH 43137 614-453-0721 Larry Young, v. pres.	Plant #6 (101)	Franklin	sand & gravel	[48]		Fn-24	IM-266
	Muskingum River Gravel Co. (247)	Muskingum	sand & gravel	[48]		Mum 228	IM-421
	Plant #1 (245)	Muskingum	sand & gravel	[48]		Mum-736	IM-804
	Plant #4 (246)	Muskingum	sand & gravel	[48]		Mum-786	IM-422
	Muskingum River Gravel Co. (299)	Ross	sand & gravel	[48]		Rs-4	IM-663
	Plant #2 (367)	Washington	sand & gravel	[48]		Wn-38	IM-701
	Plant #5 (368)	Washington	sand & gravel	[48]		Wn-52	IM-552
National Aggregate P.O. Box 12322 Columbus, OH 43212 614-224-9211 Daniel J. Furey, pres.	National Aggregate (46)	Carroll	sand & gravel	[48]		Cl-152	IM-641
National Lime & Stone Co. P.O. Box 120 Findlay, OH 45839-0120 419-422-4341 R. W. Kruse, v. pres.	Lima Plants (4)	Allen	limestone	[49]		An-2	IM-540
	Lima Plants (5)	Allen	limestone	765,535	665,000	An-3	IM-484
	Lima Plants (6)	Allen	limestone	[49]		An-11	IM-541
	Buckland Plant (11)	Auglaize	limestone	269,584	200,000	Ae-10	IM-486
	Wapakoneta Plant (24)	Auglaize	sand & gravel	165,191	130,323	Ae-30	
	Bucyrus Plant (18)	Crawford	limestone	1,055,157	1,131,000	Cd-1	IM-404
	Delaware Plant (21)	Delaware	limestone	1,296,017	1,078,000	Del-5	IM-207
	Findlay Plant (35)	Hancock	limestone	456,703	478,000	Hk-1	IM-483
	Marion Plant (60)	Marion	limestone	359,736	370,000	Mn-3	IM-168
	Carey Plants (134)	Wyandot	limestone	1,731,724	1,592,000	Wt-1	IM-405
Neer's Sand & Gravel 4859 Twp. Rd. 45 Bellefontaine, OH 43311 513-585-6733 Arden J. Neer, Sr., owner	Neer's Sand & Gravel (189)	Logan	sand & gravel	107,644	95,119	Lgn-6	IM-459
Neiheisel Sand & Gravel P.O. Box 255 Columbiana, OH 44408 216-427-2824 Thomas L. Neiheisel, Sr., owner	Neiheisel Sand & Gravel (67)	Columbiana	sand & gravel	[50]		Ca-600	IM-100
	Neiheisel Sand & Gravel (196)	Mahoning	sand & gravel	10,774	10,774	Mg-NSG[51]	IM-808
Nelson Sand & Gravel, Inc. P.O. Box 31 Kingsville, OH 44048 216-224-0198 Thomas H. Nelson, pres.	Nelson Sand & Gravel, Inc. (13)	Ashtabula	sand & gravel	38,800	38,800	Asa-11	IM-160
	Nelson Sand & Gravel, Inc. (14)	Ashtabula	sand & gravel	[48]		Asa-12	IM-911
Newark Asphalt Co. P.O. Box 7 Alexandria, OH 43001 614-366-2302 Frank B. Murphy, pres.	Alexandria Pit (173)	Licking	sand & gravel	76,004	105,053	Lg-8[52]	IM-271
New Carlisle Sand & Gravel Co. 6090 South Scarff Rd. New Carlisle, OH 45344 513-845-0696 Elizabeth Upton, owner	New Carlisle Sand & Gravel Co. (217)	Miami	sand & gravel	1,155	1,155	Mi-501	
New Miami Sand & Gravel, Inc. 151 Seven Mile Ave. New Miami, OH 45011 513-863-7676 James T. Schrimpf, owner	New Miami Sand & Gravel, Inc. (42)	Butler	sand & gravel	64,252	64,252	Br-3	IM-719
Northern Ohio Materials, Inc. 35746 Lake Shore Blvd. Eastlake, OH 44094 216-946-8467 Joe A. Began, mgr.	Northern Ohio Materials, Inc. (273)	Portage	sand & gravel	315,134	315,134	Pe-85	IM-700
	Northern Ohio Materials, Inc. (331)	Summit	sand & gravel	18,665	0	St-41	IM-113
Northmont Sand & Gravel Co. P.O. Box 185 Englewood, OH 45322 513-836-1998 Robert D. Eyre, pres.	Northmont Sand & Gravel Co. (235)	Montgomery	sand & gravel	72,094	72,094	My-49	IM-370
North Ridge Materials 3052 E. Center St. Box 599 North Kingsville, OH 44068 216-224-1009 Joseph E. Simak, pres.	North Ridge Materials (393)	Ashtabula	sand & gravel	4,710	0	Asa-16	IM-949
North Shore Stone Quarries, Inc. 72 Fernhill Ave. Columbus, OH 43228 614-878-3628 Clifford Hammond, pres.	North Shore Stone Quarries, Inc. (109)	Seneca	limestone	5,794	5,794	Sa-8	IM-313

[48]No report filed in 1986.
[49]All sales and production are reported under An-3.
[50]No sales or production.
[51]No mine number has been assigned by the Division of Mines.
[52]This mine was operated 1st through 3rd quarters 1986 by Alexandria Materials Co. and 4th quarter by Newark Asphalt Co.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Northwood Stone & Asphalt Co. 1558 County Rd. 105 Belle Center, OH 43310 513-464-3833 Don E. Mill, pres.	Northwood Stone & Asphalt Co. (51)	Logan	limestone	91,902	100,256	Lgn-2	IM-494
Nutter Bros. Coal Co., Inc. P.O. Box 190 New Lexington, OH 43766 614-394-2678 James P. Nutter, pres.	Nutter Bros. Coal Co., Inc. (47)	Perry	clay	[53]		Py-259	IM-80
Carl E. Oeder & Sons Sand & Gravel 3890 Turtlecreek Rd. Lebanon, OH 45036 513-494-1238 Carl E. Oeder, owner	Carl E. Oeder (352)	Warren	sand & gravel	226,755	230,714	Wan-41	IM-629
Ohio Asphaltic Limestone Corp. 8591 Mad River Rd. Hillsboro, OH 45133 513-364-2191 W. C. Mason, pres.	Ohio Asphaltic Limestone Corp. (42)	Highland	limestone	211,570	243,000	Hd-3	IM-253
Ohio Lime Co. Div. of Steetley Resources, Inc. 3964 County Rd. 41 Millersville, OH 43435 419-638-2511 Ian McGregor, pres.	Plant #3 (103)	Sandusky	limestone	463,004	463,004	Sy-4	IM-381
OKI Contracting, Inc. P.O. Box 92 Moscow, OH 45153 513-553-3370 John E. Jones, owner	OKI Contracting, Inc. (62)	Clermont	sand & gravel	[54]		Ct-11	
Olen Corp. 1018 Proprietors Rd. Worthington, OH 43085 614-885-4220 Toby McKee, pres.	Olen Corp. (102)	Franklin	sand & gravel	569,708	569,708	Fn-43	IM-188
Oneida Sand & Gravel, Inc. 8000 Blade Rd. Malvern, OH 44644 216-343-6831 Louis H. Smitley, pres.	Oneida Sand & Gravel, Inc. (47)	Carroll	sand & gravel	63,437	56,282	Cl-204	IM-554
Orrville Tile & Flue Lining, Inc. 1800 S. Crownhill Rd. Box 318 Orrville, OH 44667 216-682-1936 M. G. Bluing, pres.	Orrville Tile Co. (72)	Wayne	clay	[53]		We-9	IM-512
Osborne Materials Co. Williams St. P.O. Box 217 Grand River, OH 44045 216-357-5562 Harold T. Larned, pres.	Osborne Materials Co. (2)	Lake Erie	sand & gravel (dredged)	84,202	84,202		
Oster Sand & Gravel, Inc. 5947 Whipple Rd. NW North Canton, OH 44720 216-494-5472 Robert C. Oster, pres.	Oster Sand & Gravel, Inc. (326) Oster Sand & Gravel, Inc. (342)	Stark Tuscarawas	sand & gravel sand & gravel	224,531 127,691	224,531 127,691	Sk-165 Ts-1852	IM-192, IM-781 IM-75
Owens Stone Co., Inc. 1247 Ostrander Rd. Ostrander, OH 43061 614-666-7555 Kenneth F. Manning, pres.	Owens Stone Co. (22)	Delaware	limestone	355,498	350,000	Del-3	IM-327
Michael Palumbo 1732 State Rte. 43 Mogadore, OH 44260 Michael Palumbo, owner	Michael Palumbo (283)	Portage	sand & gravel	[54]		Pe-81	IM-283
Parker Sand & Stone, Inc. 8034 Hill Ave. Holland, OH 43528 419-866-5886 Robert H. Parker, pres.	Parker Sand & Stone, Inc. (194)	Lucas	sand & gravel	[54]		Ls-24	IM-901

[53]No sales or production.
[54]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Partin Sand & Gravel 4252 Taylorsville Rd. Dayton, OH 45424 513-233-9501 Arthur Partin, owner	Partin Sand & Gravel (236)	Montgomery	sand & gravel	2,450	2,450	My-55	IM-571
R. H. Penick Co. 1504 Blue Jay Rd. Heath, OH 43056 614-323-3040 Raymond H. Penick, owner	R. H. Penick Co. (3)	Licking	salt	6,903	6,903	Lg-45	
Pennsylvania Glass Sand Corp. P.O. Box 187 Berkeley Springs, WV 25411 304-258-2500 Richard E. Goodell, pres.	Coxey Works (42)	Tuscarawas	sandstone	31,074	31,074	Ts-1660	IM-68
Penry Stone Co. P.O. Box 176 Radnor, OH 43066 614-595-3473 Walter G. Penry, pres.	Penry Stone Co. (23) Penry Stone Co. (198)	Delaware Marion	limestone sand & gravel	401,541 82,994	401,541 82,994	Del-2 Mn-4	IM-299 IM-290
Phillips Sand & Gravel P.O. Box 71 Alpha, OH 45301 513-426-5461 George E. Phillips, pres.	Phillips Sand & Gravel (115)	Greene	sand & gravel	412,645	412,645	Ge-36	IM-305
Pifer Stone Co. P.O. Box 101 Williamstown, OH 45897 419-365-5078 William E. Pifer, owner	Pifer Stone Co. (36)	Hancock	limestone	14,691	11,844	Hk-4	IM-489
Pine Creek Materials, Inc. 2301 Greenup Ave. Ashland, KY 41101 606-324-3185 W. B. Lowman, pres.	Pine Creek Materials, Inc. (172)	Lawrence	sand & gravel	[55]		Le-427	IM-784
C. F. Poeppelman Sand & Stone, Inc. 4755 N. State Rte. 721 Bradford, OH 45308 513-448-2613 James Poeppelman, pres.	C. F. Poeppelman, Inc. (67)	Miami	limestone	166,724	166,724	Mi-10	IM-335
Portage Lakes Sand & Gravel Co. 2800 N. Turkeyfoot Rd. Akron, OH 44319 216-644-2285 James V. Crano, pres.	Portage Lakes Sand & Gravel Co. Plant #4 (332) Portage Lakes Sand & Gravel Co. (384)	Summit Summit	sand & gravel sand & gravel	106,216 50,297	106,216 50,297	St-33 St-53	IM-121 IM-874
Prairie Lane Sand & Gravel Co. 4401 Prairie Lane Rd. Wooster, OH 44691 216-262-6821 Ralph W. Miller, pres.	Prairie Lane Sand & Gravel Co. (372)	Wayne	sand & gravel	108,127	96,730	We-11	IM-547
Price Sand & Gravel Div. of Price Asphalt & Paving Co. 115 Jefferson St. Norwalk, OH 44857-1994 419-668-1059 Robert C. Price, pres.	Price Sand & Gravel Pit #1 (157)	Huron	sand & gravel	105,988	105,988	Hrn-1	IM-550
Purdy Sand & Gravel Co. 14220 Parrott St. Ext. P.O. Box 667 Mt. Vernon, OH 43050 614-397-0000 J. R. Purdy, pres.	Purdy Sand & Gravel Co. (163)	Knox	sand & gravel	75,155	83,516	Kx-3	IM-300
Puskarich Limestone Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Puskarich Limestone Co. (15)	Carroll	limestone	77,103	61,779	Cl-183	IM-7
Putnam Stone Co., Inc. R.R. 1 7053 Road M Ottawa, OH 45875-9754 419-523-6004 J. E. Shroyer, pres.	Putnam Stone Co. (98)	Putnam	limestone	178,916	172,485	Pm-2	IM-570

[55]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Quality Ready Mix, Inc. R.R. 5 Box 12 Wapakoneta, OH 45895 419-738-6010 Robert E. Hirschfeld, pres.	Quality Ready Mix, Inc. (25)	Auglaize	sand & gravel	10,015	10,015	Ae-16	IM-595
Queen City Gravel Co. 5050 Orchard St. Cincinnati, OH 45212 513-531-6214 Harry D. Foley, pres.	Queen City Gravel Co. (138)	Hamilton	sand & gravel	[56]		Hmn-16	IM-272
R & R Aggregates, Inc. P.O. Box 863 Chillicothe, OH 45601 614-774-6700 Charles E. River, pres.	R & R Aggregates, Inc. (300)	Ross	sand & gravel	5,204	5,204	Rs-23	IM-875
Rack Sand, Inc. 5175 Este Ave. Cincinnati, OH 45232 513-242-5052 George L. Rack, pres.	Rack Sand, Inc. (139)	Hamilton	sand & gravel	114,180	114,180	Hmn-10	IM-226
Ramsier Sand & Gravel 113 Howe St. Lodi, OH 44254 216-948-1749 Larry L. Ramsier, owner	Ramsier Sand & Gravel (205)	Medina	sand & gravel	262	262	Ma-12	IM-516
Rialto Farms 1690 Owens Rd. W Marion, OH 43302 614-387-6754 Dennis E. Mattix, partner	Rialto Farms (199)	Marion	sand & gravel	[56]		Mn-17	IM-460
Richards & Son, Inc. P.O. Box 232 Pomeroy, OH 45769 614-247-2311 Don E. Mill, pres.	Richards & Son, Inc. (212)	Meigs	sand & gravel	441,545	441,545	Ms-298	IM-32
Ridge Township Quarry R.R. 1 Box 263 Van Wert, OH 45891 419-238-2533 Jenny Lautenschleger, foreman	Ridge Township Quarry (122)	Van Wert	limestone	62,414	69,315	Vt-7	IM-642
Ries Sand & Gravel 169 State Rte. 95 Jeromesville, OH 44840 419-368-7833 Robert Ries, owner	Ries Sand & Gravel (6)	Ashland	sand & gravel	7,043	7,067	Ald-9	IM-745
Riverside Sand & Gravel Co., Inc. P.O. Box 324 Tallmadge, OH 44278-0324 216-673-2021 E. Acken, pres.	Riverside Sand & Gravel (Acken) (333)	Summit	sand & gravel	95,526	81,582	St-24	IM-239
Rockford Stone Co. 3491 U.S. Rte. 33 Rockford, OH 45882 419-363-3392 Robert E. Beerbower, pres.	Rockford Stone Co. (63)	Mercer	limestone	68,773	93,090	Mr-2	IM-430
L. G. Rockhold & Sons, Inc. 28541 State Rte. 739 West Mansfield, OH 43358 513-358-2224 Howard E. Rockhold, pres.	L. G. Rockhold & Sons, Inc. (119)	Union	limestone	125,273	103,306	Un-1	IM-208
Rockport Sand & Gravel Co., Inc. 9215 Rock St. Columbus Grove, OH 45830 419-358-5846 Shannon C. Reese, pres.	Rockport Sand & Gravel Co., Inc. (1) Rockport Sand & Gravel Co., Inc. (2) Rockport Sand & Gravel Co., Inc. (178)	Allen Allen Licking	sand & gravel sand & gravel sand & gravel	31,686 24,911 [56]	31,686 24,911	An-14 An-15 Lg-35	IM-523 IM-721 IM-734
Romany Ceramics, Inc. Div. of U.S. Ceramic Tile Co. 19233 Sandyville Rd. SE East Sparta, OH 44626 216-866-5531 Robert E. Schlemmer, pres.	Romany Ceramics, Inc. (55) (55)	Stark	clay shale	983 3,932	983 3,932	Sk-170	IM-365

[56]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Rubber City Sand & Gravel Co. P.O. Box 7126 Akron, OH 44306 216-699-3311 Ronald F. Orr, owner	Knight Plant (334)	Summit	sand & gravel	6,423	6,677	St-9	IM-167
Ruggles Stone Co. 9386 State Rte. 41 Aberdeen, OH 45101 513-375-3278 Denver Ruggles, owner	Ruggles Stone Co. (27)	Brown	sand & gravel	5,905	5,905	Bn-5	IM-276
Rupp Construction, Inc. 18228 Fulton Rd. Marshallville, OH 44645 216-855-2781 J. P. Radabaugh, pres.	Rupp Construction, Inc. (373)	Wayne	sand & gravel	210,206	210,206	We-7	IM-471
S & S Aggregate P.O. Box 608 Zanesville, OH 43702-0608 614-453-0721 Larry Young, v. pres.	S & S Aggregate (152) S & S Aggregate (281) S & S Aggregate (282) S & S Aggregate (337) S & S Aggregate (338) S & S Aggregate (336)	Hocking Portage Portage Summit Summit Summit	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	[57] [57] [57] [59] [59] [57]		Hg-301 Pe-59[58] Pe-67[58] St-29[58] St-32[58] St-44[58]	IM-458 IM-210 IM-202 IM-203 IM-178
S & W Cement Contractors, Inc. 1289 Dequincy Dr. Xenia, OH 45385 513-426-1423 Joanne Weddle, v. pres.	S & W Cement Contractors, Inc. (116)	Greene	sand & gravel	[57]		Ge-39	
SME Bessemer Cement, Inc. P.O. Box 5250 Poland, OH 44514 216-499-9100 Michael C. Miller, pres.	SME Limestone (58) (33) Quarry #8 (57) (34)	Mahoning Mahoning 	limestone clay limestone shale	[59] [59] 1,507,350 102,085	 1,928,690 102,085	Mg-507 Mg-608 	IM-8 IM-4
SME Cement, Inc. 8282 Middle Rd. P.O. Box 234 Middlebranch, OH 44562 216-499-9100 Michael C. Miller, pres.	#2 Pit (54) (54) #3 Pit (115)	Stark Stark	clay shale limestone	[59] [59] [59]		Sk-204 Sk-222	IM-726 IM-819
Salt Creek Materials, Inc. 880 Spry Rd. Zanesville, OH 43701 614-872-3860 Charles O. Lighthizer, owner	Salt Creek Materials, Inc. (248) Salt Creek Materials, Inc. (249)	Muskingum Muskingum	sand & gravel sand & gravel	26,714 [59]	27,714	Mum-216 Mum-220	IM-689 IM-623
Samco, Inc. 10217 State Rte. 534 N Middlefield, OH 44062 216-272-5158 J. Jim Holmes, pres.	Samco, Inc. (340)	Ashtabula, Trumbull	sand & gravel	[57]		Tl-12	IM-131
Homer Sammet Trucking R.R. 5 Upper Sandusky, OH 43351 419-294-1342 Homer Sammet, owner	Homer Sammet Trucking (383)	Wyandot	sand & gravel	[57]		Wt-13	IM-618
Sandkuhl Tile Co. 05536 Kossuth-Amanda Rd. Spencerville, OH 45887 419-647-4131 Leslie E. Sandkuhl, pres.	Sandkuhl Tile Co. (2)	Auglaize	clay	2,001	1,194	Ae-7	
Sandusky Crushed Stone Co., Inc. Div. of Rogers Group, Inc. P.O. Box 527 Sandusky, OH 44870 419-625-8493 H. A. (Bud) Stephenson, mgr.	Sandusky Crushed Stone Co., Inc. (25)	Erie	limestone	2,157,645	2,131,534	Ee-11	IM-263
Earl H. Schilling & Sons, Inc. Rte. 2 Box 326 Ironton, OH 45638 614-532-8463 Earl H. Schilling, owner	Earl H. Schilling & Sons, Inc. (305)	Scioto	sand & gravel	10,000	10,000	So-78	
Schloss Paving Co. 13700 McCracken Rd. Cleveland, OH 44125 216-578-4900 Raymond E. Schloss, Sr., owner	Schloss Paving Co. (274)	Portage	sand & gravel	84,197	84,197	Pe-60	IM-78

[57]No report filed in 1986.
[58]This mine was operated 1st and 2nd quarters 1986 by Twin Lakes Sand, Inc. and 3rd and 4th quarters by S & S Aggregate.
[59]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Schrader Sand & Gravel 293 Tile Mill Rd. Beaver, OH 45613 Melvin Schrader, owner	Schrader Sand & Gravel (45)	Pike	sandstone	[60]		Pke-31	IM-682, IM-835
Scioto Valley Resources Box 760 Lucasville, OH 45648 513-393-4211 John B. Patton, pres.	Scioto Valley Resources Division (395)	Scioto	sand & gravel	26,734	54,320	So-100	
Seaway Sand & Stone, Inc. 2190 Whitehouse-Spencer Rd. Swanton, OH 43558 419-865-5751 Mack S. Moon, pres.	Seaway Sand & Stone (195)	Lucas	sand & gravel	145,136	145,136	Ls-13	IM-492
Seville Sand & Gravel, Inc. 8215 Seville Rd. Seville, OH 44273 216-948-1812 George Cross, pres.	Seville Sand & Gravel, Inc. (207) Seville Sand & Gravel, Inc. (206)	Medina Medina	sand & gravel sand & gravel	[60] 167,658	 157,529	Ma-9 Ma-22	IM-425 IM-650, IM-651
R. W. Sidley, Inc. 615 W. Main St. Conneaut, OH 44030 216-298-3232 Ray Martin, mgr.	Conneaut Pit (15) R. W. Sidley, Inc. (16)	Ashtabula Ashtabula	sand & gravel sand & gravel	4,910 [60]	6,660	Asa-15 Asa-RWS[61]	IM-783 IM-219, IM-233
R. W. Sidley, Inc. 7123 Madison Rd. Thompson, OH 44086 216-298-3232 Dave English, mgr.	Thompson Pit (18) Painesville Plant (166)	Geauga Lake	sandstone sand & gravel	157,300 25,000	248,680 34,500	Gea-1 Lke-7	IM-163 IM-162
Sidney Sand & Gravel Co. P.O. Box 379 Sidney, OH 45365 513-492-3125 Samuel J. Milligan, pres.	Milligan & Milligan-Washington Twp. Pit (312) Rock Run Quarry (111)	Shelby Shelby	sand & gravel limestone	107,247 44,089	101,058 51,441	Shy-13 Shy-16	IM-412 IM-411
Sidwell Bros., Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 614-849-2392 Dale R. Sidwell, pres.	Sidwell Quarry (78)	Muskingum	limestone	409,210	409,210	Mum-104	IM-277
Silchuk Gravel Co. 2470 Wall Rd. Rittman, OH 44270 216-336-8796 Junior F. Silchuk, owner	Silchuk Gravel Co. (208)	Medina	sand & gravel	[62]		Ma-16	
Silver Arrow Systems, Inc. 7730 Bond St. Solon, OH 44139 216-439-3100 Frank Grezlik, owner	Silver Arrow Systems, Inc. (76)	Cuyahoga	sand & gravel	15,187	15,187	Cya-26	IM-683
Joe Simak & Sons Trucking, Inc. 3052 E. Center St. Box 599 North Kingsville, OH 44068 216-224-1009 Joseph E. Simak, pres.	Penn Line Pit (394)	Ashtabula	sand & gravel	4,525	0	Asa-S[61]	IM-853
Simanton Sand Co. P.O. Box 387 Norwalk, OH 44857 419-668-2952 Harlon K. Jennings, pres.	Simanton Sand Co. (7)	Ashland	sand & gravel	18,286	18,286	Ald-11	IM-543
Skidmore & Chah, Inc. 1820 W. Broadway Phoenix, AZ 85041 602-437-0343 David C. Chah, pres.	Amboy Pit (17)	Ashtabula	sand & gravel	[62]		Asa-13	IM-785
Small's Sand & Gravel, Inc. 20420 Zion Rd. P.O. Box 617 Gambier, OH 43022 614-427-4096 William Small, pres.	Small's Sand & Gravel, Inc. (164) Small's Sand & Gravel, Inc. (165)	Knox Knox	sand & gravel sand & gravel	76,118 204,546	124,565 204,546	Kx-8 Kx-15	IM-267
Sober Sand & Gravel Co. 2898 Tallmadge Rd. Ravenna, OH 44266 216-325-7013 Waldo A. Sober, pres.	Sober Sand & Gravel Co. (275)	Portage	sand & gravel	1,972	0	Pe-18	IM-193

[60]No report filed in 1986.
[61]No mine number has been assigned by the Division of Mines.
[62]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Soehnlen Bros. Sand & Gravel Co. R.D. 1 Beach City, OH 44608 216-756-2244 Francis L. & Nicholas S. Soehnlen, partners	Soehnlen Bros. Sand & Gravel (343)	Tuscarawas	sand & gravel	54,023	88,211	Ts-1826	IM-88
Solon Excavators Sand & Gravel, Inc. 3583 Frost Rd. Mantua, OH 44255 216-274-8241 Howard Sargent, owner	Solon Excavators Sand & Gravel, Inc. (276)	Portage	sand & gravel	306,348	306,348	Pe-36	IM-90
Somerset Lime & Stone, Inc. 10610 Stone Quarry Rd. Somerset, OH 43783 614-452-8335 John F. Busse, pres.	Somerset Lime & Stone, Inc. (90)	Perry	limestone	[63]		Py-266	IM-166
Southern Hills Supply, Inc. 2101 W. Dorothy Lane Dayton, OH 45439 513-298-7215 W. A. Wadsworth, pres.	Southern Hills Supply, Inc. (237)	Montgomery	sand & gravel	[64]		My-59	IM-627
Southern Ohio Aggregates 11641 Mosteller Rd. Cincinnati, OH 43113 513-771-0820 John C. Jurgensen, pres.	Southern Ohio Aggregates (284)	Preble	sand & gravel	[63]		Pre-7	IM-306
Southern Silica, Inc. P.O. Box 22 Richmond Dale, OH 45673 614-884-4721 George W. Cannon, pres.	Southern Silica, Inc. (34)	Ross	sandstone	164,888	211,177	Rs-16	IM-172
Southwestern Portland Cement Co. Eastern Division 506 E. Xenia Rd. P.O. Box 191 Fairborn, OH 45324 513-878-8651 John Davies, pres.	Southwestern Portland Cement Co. (33) Southwestern Portland Cement Co. (10) Southwestern Portland Cement Co. (34) Southwestern Portland Cement Co. (72)	Clark, Greene Greene Greene Montgomery	limestone clay limestone limestone	660,139 143,111 [64] 185,637	660,139 143,111 185,637	Ge-1[65] Ge-8 Ge-9 My-58	IM-393 IM-364 IM-364 IM-330
Sphagnum Moss Peat Farm 9797 Thompson Rd. West Liberty, OH 43357 513-653-7337 Herman S. Thompson, owner	Sphagnum Moss Peat Farm (2)	Champaign	peat	16,095	11,026	Cpn-9	
Spring Creek Corp. 4723 Hardin-Wapak Rd. Sidney, OH 45365 513-492-9697 Nelson E. Barhorst, pres.	Pence Deposit (314) River Quarry (112) Jones Deposit (315)	Shelby Shelby Shelby	sand & gravel limestone sand & gravel	159,930 81,448 50,000	159,930 81,448 50,000	Shy-11 Shy-15 Shy-18	IM-743 IM-387 IM-388
Spring Industries P.O. Box 507 New Philadelphia, OH 44663 216-339-3585 Glenn Straub, pres.	Midvale Pit (344) County Line Plant (345)	Tuscarawas Tuscarawas	sand & gravel sand & gravel	259,360 14,987	442,157 54,400	Ts-1771 Ts-1788	IM-77 IM-73
Spring Valley Investments, Inc. 2800 Turkeyfoot Rd. Akron, OH 44319 216-644-2285 James V. Crano, pres.	Spring Valley Investments, Inc. (335)	Summit	sand & gravel	[64]		St-26	IM-803
Springfield Sand & Gravel Co. 4301 S. Charleston Pike Springfield, OH 45502 513-325-7386 Don E. Mill, pres.	Springfield Sand & Gravel Co. (58)	Clark	sand & gravel	439,361	439,361	Ck-25	IM-358
Standard Slag Co. 1200 Stambaugh Bldg. P.O. Box 1378 Youngstown, OH 44501 216-743-3151 R. T. Beeghly, pres.	Adams (2) Forest (39) Marblehead (84) Cutlip (255) Shalersville (277) Shalersville Portable (278) Haverhill (306)	Adams Hardin Ottawa Pike Portage Portage Scioto	limestone limestone limestone sand & gravel sand & gravel sand & gravel sand & gravel	273,474 3,688 1,324,740 386,943 885,327 [64] 281,581	283,101 0 1,287,222 375,898 898,725 259,587	Ads-6 Hdn-1 Oa-7 Pke-24 Pe-68 Pe-SS1[66] So-79	IM-659 IM-488 IM-440 IM-222 IM-143, IM-687 IM-660 IM-221

[63]No report filed in 1986.
[64]No sales or production.
[65]All sales and production are from Greene County.
[66]No mine number has been assigned by the Division of Mines.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Steetley Resources, Inc. Main St. Woodville, OH 43469 419-849-2321 Ian McGregor, pres.	Ohio Lime Co. (104)	Sandusky	limestone	[67]		Sy-3	IM-282
	Ohio Lime Co. (105)	Sandusky	limestone	783,940	637,260	Sy-8	IM-249
Stewart & Reichman, Inc. Rte. 1 Box 64 Gnadenhutten, OH 44629 614-922-0050 Donald P. Brown, pres.	Stewart & Reichman, Inc. (346)	Tuscarawas	sand & gravel	38,544	38,544	Ts-111	IM-55
Stocker Sand & Gravel Co. P.O. Box 176 Gnadenhutten, OH 44629 614-254-4635 William E. Stocker, pres.	Stocker Sand & Gravel Co. (347)	Tuscarawas	sand & gravel	241,446	241,446	Ts-69	IM-51
	Stocker Sand & Gravel Co. (348)	Tuscarawas	sand & gravel	265,790	265,790	Ts-125	IM-50
Stoneco 221 Allen St. P.O. Box 29A Maumee, OH 43537 419-893-8731 J. T. Kirkby, pres.	Maumee Quarry (54)	Lucas	sand & gravel	1,412	[68]	Ls-2	IM-503
			limestone	766,558	758,380		
	Rocky Ridge (83)	Ottawa	limestone	166,953	149,555	Oa-14	IM-320
	Auglaize Quarry (88)	Paulding	limestone	381,931	422,597	Pg-2	IM-481
	Scott Quarry (121)	Van Wert	limestone	305,983	303,693	Vt-3	IM-495
	South Montpelier (375)	Williams	sand & gravel	100,056	92,195	Ws-6	IM-497
			limestone	3,960	[68]		
	North Montpelier (376)	Williams	sand & gravel	[67]		Ws-9	IM-498
	Lime City Quarry (131)	Wood	limestone	445,215	362,879	Wd-6	IM-480
	Portage Quarry (132)	Wood	limestone	136,245	120,240	Wd-11	IM-475
Stone Creek Brick Co. P.O. Box 116 Stone Creek, OH 43840 216-339-5511 A. C. Marsh, Jr., pres.	Stone Creek Brick Co. Clay Mine (67)	Tuscarawas	clay	56,931	56,931	Ts-1557	IM-52
	Stone Creek Brick Co. Shale Mine (67)	Tuscarawas	shale	7,036	7,036	Ts-1558	IM-52
Stone Products, Inc. 4650 Southway SW P.O. Box 6412 Canton, OH 44706 216-478-2151 W. Mark Sterling, pres.	Stone Products, Inc. (317)	Stark	sand & gravel	11,478	0	Sk-190	IM-839
Sturm & Dillard Co. P.O. Box 107 Circleville, OH 43113 614-837-9067 John F. Fissell, pres.	Sturm & Dillard Co. (251)	Pickaway	sand & gravel	348,673	348,673	Pky-1	IM-409, IM-428, IM-668
Suever Stone Co., Inc. Bloomlock Rd. P.O. Box 67 Delphos, OH 45833 419-692-0931 Carl Suever, pres.	Suever Stone Co. (7)	Allen	limestone	139,361	136,561	An-4	IM-491
	Delphos Plant (123)	Van Wert	limestone	176,371	178,881	Vt-1	IM-500
Sugar Creek Stone Quarry, Inc. P.O. Box 584 Washington Court House, OH 43160-0637 614-335-6301 Charles R. Armbrust, pres.	Sugar Creek Stone Quarry, Inc. (29)	Fayette	limestone	98,660	110,976	Fe-3	IM-329
Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 216-852-4440 Daniel O. Miller, gen. mgr.	Sugarcreek Clay & Limestone, Inc. (118)	Tuscarawas	limestone	40,604	38,551	Ts-1928	IM-98
	Sugarcreek Clay & Limestone, Inc. (69)		clay	[67]			
	(69)		shale	[67]			
Summitville Tiles, Inc. Summitville, OH 43962 216-223-1511 Peter C. Johnson, pres.	Summitville Tiles, Inc. (5)	Columbiana	shale	58,571	58,571	Ca-205	IM-74
T & J Sand & Gravel, Inc. 7450 Dryfork Rd. Cleves, OH 45002 513-367-6101 Gerald A. Legge, owner	T & J Sand & Gravel, Inc. (140)	Hamilton	sand & gravel	[67]		Hmn-58	IM-840
Tarbox-McCall Stone Co. Div. of Hancock Ready Mix, Inc. 852 Western Ave. Findlay, OH 45840 419-422-1912 Kenneth R. Pfirsch, pres.	Tarbox-McCall Stone Co. (37)	Hancock	limestone	165,658	151,805	Hk-2	IM-439

[67]No sales or production.
[68]Sales only, no production. Material shipped in for sale.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Taylor Stone Co., Inc. P.O. Box 186 McDermott, OH 45652 614-259-2361 William A. McKinney, pres.	Taylor Quarry (35)	Scioto	sandstone	[69]		So-47	IM-251
Teague Gravel Co., Inc. 10924 Kinsman Rd. Newbury, OH 44065 216-564-5671 Donald R. Teague, pres.	Teague Gravel Co., Inc. (109)	Geauga	sand & gravel	44,007	37,966	Gea-35	IM-321
Terra Vista Sand & Gravel Co. 23850 Commerce Park Cleveland, OH 44125 216-464-0903 Adrian DeFranco, pres.	Terra Vista Sand & Gravel (280)	Portage	sand & gravel	[69]		Pe-64	IM-229
Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 J. E. Thompson, pres.	Thompson Bros. Mining Co. (35)	Mahoning	clay	[69]		Mg-588	
Three Locks Construction Co. P.O. Box 88 Chillicothe, OH 45601 614-774-4689 Franklin B. Conaway, pres.	N-3 (293)	Ross	sand & gravel	76,763	112,010	Rs-19	IM-620
Three Rivers Sand & Gravel, Inc. 400 Cooper Ave. Cleves, OH 45002 513-241-2929 Richard Richter, pres.	Three Rivers Sand & Gravel, Inc. (141)	Hamilton	sand & gravel	19,729	19,729	Hmn-28	IM-353
Ticon Corp. 10328 N. Hardin Rd. Piqua, OH 45356 513-698-3043 Lloyd B. Fry, pres.	Ticon Corp. (390)	Miami	sand & gravel	96,485	95,485	Mi-T[70]	IM-696
Tipp Stone, Inc. P.O. Box 367 Troy, OH 45373 513-890-4051 T. L. Eidemiller, pres.	Tipp Stone, Inc. (68) Tipp Stone, Inc. (218) Tipp Stone, Inc. (238)	Miami Miami Montgomery	limestone sand & gravel sand & gravel	[71] [71] 94,836	 64,785	Mi-12 Mi-14 My-61	IM-467 IM-467 IM-468
Towne Square Products 156 E. Broadway Westerville, OH 43081 614-882-6990 Suzanne L. Stilson, owner	Towne Square Products (41)	Noble	shale	735	735	Ne-66	IM-664
Tri County Limestone Co. 4664 Hardin-Marion Rd. Kenton, OH 43326 419-675-7127 Norman Cochran, pres.	Tri County Limestone Co. (61)	Marion	limestone	121,771	121,771	Mn-1	IM-250
Tri County Sand & Gravel 1001 N. Third St. P.O. Box 303 Hamilton, OH 45012 513-867-1633 Juanita Nicley, pres.	Tri County Sand & Gravel (43)	Butler	sand & gravel	[69]		Br-54	
Tri State Asphalt Products 44 Sixteenth St. Wheeling, WV 26003 614-633-2331 Glenn Straub, pres.	Tri State Asphalt Products (26)	Belmont	sand & gravel	450,771	579,332	Bt-74	IM-288
Trout Sand & Gravel Co. Rte. 4 Marietta OH 45750 614-373-7471 Henry Clay Trout, Jr., owner	Trout Sand & Gravel Co. (369)	Washington	sand & gravel	32,128	32,128	Wn-510	IM-25
Troy Gravel Co. P.O. Box 440 Tipp City, OH 45371 513-667-4431 James Ernst, pres.	Troy Gravel Co. (219)	Miami	sand & gravel	293,142	307,444	Mi-3	IM-462

[69]No sales or production.
[70]No mine number has been assigned by the Division of Mines.
[71]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Twin Lakes Sand, Inc. 2307 State Rte. 303 Streetsboro, OH 44240 216-626-3016 M. H. Leahy, pres.	Twin Lakes Sand, Inc. (281) Twin Lakes Sand, Inc. (282) Twin Lakes Sand, Inc. (337) Twin Lakes Sand, Inc. (338) Twin Lakes Sand, Inc. (336)	Portage Portage Summit Summit Summit	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	40,181 15,209 [73] [73] 17,760	40,181 15,209 17,760	Pe-59[72] Pe-67[72] St-29[72] St-32[72] St-44[72]	IM-210 IM-202 IM-203 IM-178
USG Industries, Inc. 21880 W. State Rte. 163 Genoa, OH 43430-0158 419-855-8336 Paul F. Gnepper, supt.	USG Industries, Inc. (85)	Ottawa	limestone	230,422	262,107	Oa-1	IM-292
Union Aggregates Co. 8328 Watkins Rd. P.O. Box 178 Ostrander, OH 43061 614-666-5841 Don E. Mill, pres.	Prospect Sand & Gravel Plant (200) Green Camp Gravel Plant (201) Union Limestone Plant (120)	Marion Marion Union	sand & gravel sand & gravel limestone	28,860 [73] 691,601	22,644 691,601	Mn-10 Mn-12 Un-2	IM-196 IM-197 IM-236
Union Slag Corp. P.O. Box 652 Marietta, OH 45750 614-373-5436 Josephine W. Hune, owner	Union Slag Plant #3 (370) Union Slag Plant #2 (371)	Washington Washington	sand & gravel sand & gravel	30,387 49,519	0 65,647	Wn-43 Wn-44	IM-61 IM-63
Valley Gravel Co. P.O. Box 440 Tipp City, OH 45371 513-667-4431 James Ernst, pres.	Valley Gravel Co. (220)	Miami	sand & gravel	259,388	152,291	Mi-8	IM-355
Van Ness Landscaping 12538 Chillicothe Rd. Chesterland, OH 44026 216-729-4157 Leonard & Fred Van Ness, owners	Van Ness Landscaping (398)	Geauga	sand & gravel	[74]		Gea-37	IM-872
Van Wey Sand & Gravel, Inc. 6824 Mt. Vernon Rd. NE Newark, OH 43055 614-745-5965 Richard L. Van Wey, pres.	Van Wey Sand & Gravel, Inc. (179)	Licking	sand & gravel	277,926	115,000	Lg-10	IM-217
Wagner Quarries Co. 4203 Milan Rd. Sandusky, OH 44870 419-625-8141 Stephen C. Lochner, pres.	Wagner Quarries Co. (26)	Erie	limestone	1,155,948	1,124,560	Ee-1	IM-310
Waller Bros. Stone Co. P.O. Box 157 McDermott, OH 45652 614-259-2356 Frank L. Waller, owner	Inskeep Quarry (36) Crabtree Quarry (37) Miller Quarry (38)	Scioto Scioto Scioto	sandstone sandstone sandstone	102 13,688 [73]	102 13,688	So-48 So-76 So-82	IM-140 IM-141 IM-158
Walter's Gravel 11302 National Rd. SE Thornville, OH 43076 614-323-0783 Viva W. Fenice, owner	Walter's Gravel (26) Walter's Gravel (180)	Licking Licking	sandstone sand & gravel	[73] [73]		Lg-22 Lg-15	
Waterloo Coal Co. P.O. Box 177 Oak Hill, OH 45656 614-682-7787 Harold Bowman, pres.	Zoar (47) (23)	Jackson	limestone clay	734,989 36,412	734,989 36,412	Jkn-367	IM-774, D-0163, D-0273, D-0286
Watson Gravel, Inc. P.O. Box 277 Ross, OH 45061 513-863-0070 Ronald E. Watson, pres.	Watson Pit (44) Harrison Pit (142) Mason Pit (363) Todorov Pit (351)	Butler Hamilton Warren Warren	sand & gravel sand & gravel sand & gravel sand & gravel	385,569 437,115 182,092 93,952	385,569 437,115 182,093 60,021	Br-47 Hmn-60 Wan-10 Wan-22	IM-111 IM-761 IM-465 IM-324
Weaver's Peat Co. c/o Weaver's Lawn & Garden Products, Inc. P.O. Box 333 Bowling Green, OH 43402 419-352-8429 Alan Weaver, owner	Weaver's Peat Co. (3)	Logan	peat	[73]		Lgn-33	
Weber Sand & Gravel P.O. Box 116 Reedsville, OH 45772 614-378-6293 Denver Weber, owner	Weber Sand & Gravel (213)	Meigs	sand & gravel	9,125	9,125	Ms-287	IM-33

[72]This mine was operated 1st and 2nd quarters 1986 by Twin Lakes Sand, Inc. and 3rd and 4th quarters by S & S Aggregate.
[73]No sales or production.
[74]No report filed in 1986.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
Weber Sand & Gravel, Inc. R.D. 1 Edgerton, OH 43517 419-298-2592 Thomas G. Weber, pres.	Weber Sand & Gravel, Inc. (377)	Defiance, Williams	sand & gravel	136,748	136,748	Ws-11[75]	IM-509, IM-611
Weidle Sand & Gravel, Inc. P.O. Box 247 Germantown, OH 45327 513-855-4501 Ronal L. Weidle, pres.	Weidle Sand & Gravel, Inc. (41) Weidle Sand & Gravel, Inc. (239)	Butler Montgomery	sand & gravel sand & gravel	[76] 82,478	 82,478	Br-6[77] My-41	IM-177, IM-181 IM-360
Welch Sand & Gravel, Inc. 10217 Columbia St. Harrison, OH 45030-9751 513-353-3220 Charles H. Welch, pres.	Schlichter Pit (45) Fernald Pit (143) East Miami Pit (144) Welch Sand & Gravel, Inc. (146)	Butler Hamilton Hamilton Hamilton	sand & gravel sand & gravel sand & gravel sand & gravel	303,200 3,600 253,200 [76]	303,200 3,600 253,200 	Br-38 Hmn-42 Hmn-48 Hmn-W[78]	IM-218 IM-823 IM-220 IM-224
Wentz Concrete & Supply, Inc. R.D. 3 Newcomerstown, OH 43832 614-498-7788 Greg Wentz, pres.	Wentz Concrete & Supply, Inc. (73)	Coshocton	sand & gravel	[76]		Cn-647	IM-753
White Bros. Sand, Inc. 1845 Collingwood Blvd. Toledo, OH 43695 419-243-2121 Ralph K. Kuhlman, pres.	White Bros. Sand, Inc. (3)	Maumee Bay, Maumee River	sand & gravel (dredged)	164,136	164,136		
Whitehall Farms, Inc. 315 Academy St. Box 335 Green Springs, OH 44836 419-639-2943 John Burdett, pres.	Whitehall Farms, Inc. (302)	Sandusky	sand & gravel	[79]		Sy-18	
George E. Williams Excavating, Inc. 775 Cherokee Dr. Lancaster, OH 43130 614-653-9070 George E. Williams, pres.	George E. Williams Excavating, Inc. (93)	Fairfield	sand & gravel	[79]		Fd-6	
Dennis Winzeler Rte. 4 Box 4 Bryan, OH 43506 419-636-4285 Polly Winzeler, owner	Winzeler Excavating Co. (190) Dennis Winzeler (378)	Logan Williams	sand & gravel sand & gravel	[79] [79]	 	Lgn-38 Ws-14	IM-881 IM-614
John Wise Gravel Co. 8535 W. Klinger Rd. Covington, OH 45318 513-473-3246 John A. Wise, owner	John Wise Gravel Co. (221)	Miami	sand & gravel	4,002	4,002	Mi-9	IM-408
Woodville Concrete Corp. 7131 W. Fenner Rd. Ludlow Falls, OH 45339 513-698-4156 Dorothy Strohm, pres.	Woodville Concrete Corp. (222)	Miami	sand & gravel	2,206	0	Mi-4	IM-472
Wright Sand 3632 South State Rte. 231 Tiffin, OH 44883 419-447-5346 Paul J. Wright, owner	Wright Sand (307)	Seneca	sand & gravel	3,437	4,832	Sa-11	IM-561
Wyandot Dolomite, Inc. P.O. Box 126 Carey, OH 43316-0126 419-396-7641 H. P. Wolfe, pres.	Wyandot Dolomite, Inc. (135)	Wyandot	limestone	859,161	732,684	Wt-8	IM-273
Wysong Gravel Co. 5040 Wolfe Creek Pike P.O. Box 5 Dayton, OH 45426-0005 513-962-2559 Gerald E. Wysong, pres.	Camden Plant (285) West Alexandria Plant (286)	Preble Preble	sand & gravel sand & gravel	83,029 101,407	83,029 125,605	Pre-4 Pre-6	IM-477 IM-478
Wysong Stone Co. 5897 State Rte. 503 N Lewisburg, OH 45338 513-962-2559 Gerald E. Wysong, pres.	Wysong Stone Co. (95)	Preble	limestone	33,573	33,573	Pre-5	IM-447

[75]All sales and production are from Williams County.
[76]No report filed in 1986.
[77]This mine was operated 1st and 2nd quarters 1986 by Moorman Sand & Gravel Co. and 3rd and 4th quarters by Weidle Sand & Gravel, Inc.
[78]No mine number has been assigned by the Division of Mines.
[79]No sales or production.

1986 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1986 sales (tons)	1986 production (tons)	State mine number	Division of Reclamation permit number
X L Sand & Gravel P.O. Box 157 Negley, OH 44441 216-426-9876 Robert Lansberry, pres.	X L Sand & Gravel (68)	Columbiana	sand & gravel	[80]		Ca-881	IM-611
Xenia Sand, Gravel, & Asphalt Paving Co. Dayton-Xenia Rd. P.O. Box 10 Xenia, OH 45385 513-372-2736 John D. Burnoff, owner	Xenia Sand, Gravel, & Asphalt Paving Co. (117)	Greene	sand & gravel	16,200	12,700	Ge-10	IM-518
Yoder Farms Aggregates 8141 Cemetery Pike Plain City, OH 43064 614-873-4489 Loyd L. Yoder, pres.	Yoder Farms Aggregates (399)	Madison	sand & gravel	[80]		Mdn-11	IM-906
York Road Gravel Co. 8819 York Rd. SW Pataskala, OH 43062 614-927-2821 Jack & Jean Klima, owners	York Road Gravel Co. (181)	Licking	sand & gravel	15,383	15,383	Lg-38	IM-695
William H. Young 6961 Springfield-Xenia Rd. Yellow Springs, OH 45387 William H. Young, pres.	William H. Young (385)	Clark	sand & gravel	[81]		Ck-501	IM-340
Young's Sand & Gravel Co. 689 State Rte. 39 W Box 117 Loudonville, OH 44842 419-994-3040 Milton, Marion, & Delmar Young, partners	Young's Sand & Gravel Co. (8)	Ashland	sand & gravel	220,590	235,632	Ald-7	IM-392
Zerger's Quarry 100 N. Sycamore St. Woodsfield, OH 43793 614-472-1675 Herman Zerger, owner	Zerger's Quarry (80)	Monroe, Noble	limestone	[80]		Ne-86	IM-70
Zoar Mining Co. P.O. Box 550 Zoar, OH 44697 216-874-2434 John Hothem, pres.	Zoar Mining Co. (70) (70) Zoar Mining Co. (71)	Tuscarawas Tuscarawas	clay shale clay	2,098 6,502 46,944	2,098 6,502 46,944	Ts-538 Ts-540	IM-27 IM-28
Zollinger Sand & Gravel Co. 11899 Easton Rd. Rittman, OH 44270 216-855-2464 Carl Zollinger, pres.	Zollinger Sand & Gravel Co. (374)	Wayne	sand & gravel	241,620	255,500	We-15	IM-398

[80]No report filed in 1986.
[81]No sales or production.

1986 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Adams	Davon, Inc.	Plum Run Stone Division	Meigs	Peebles, Greenfield, & Tymochtee Dolomites (Silurian)	crushed stone—riprap, metallurgical stone, stone for portland cement concrete, building, road base, resurfacing stone, railroad ballast; rock dust; aglime	Ads-1
	Standard Slag Co.	Adams	Franklin	Silurian	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone	Ads-6
Allen	Bluffton Stone Co.	Bluffton Stone Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, farm, construction; aglime	An-1
	National Lime & Stone Co.	Lima Plants	Bath	Silurian	crushed stone—riprap, building, road base, resurfacing stone, railroad ballast; aglime	An-3[1]
	Suever Stone Co., Inc.	Suever Stone Co.	Spencer	Tymochtee Dolomite (Silurian)	crushed stone—stone for bituminous concrete, building, road base, resurfacing stone; aglime	An-4
Athens	Diamond Stone Quarries, Inc.	Plant No. 1	Lee	Brush Creek limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	As-532
		Plant No. 2	Lee	Brush Creek limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	As-533
Auglaize	Con-Ag, Inc.	Con-Ag, Inc.	Noble	Cedarville Dolomite (Silurian)	crushed stone—riprap, building, road base, resurfacing stone	Ae-31
	National Lime & Stone Co.	Buckland Plant	Moulton	Silurian	crushed stone—riprap, building, road base, resurfacing stone, railroad ballast; aglime	Ae-10
Belmont	Ayers Limestone Quarry, Inc.	Ayers Limestone Quarry	Pease	Permian	crushed stone—riprap, building, road base, resurfacing stone	Bt-716
	Cravat Coal Co.	Dover Pit	York	Fishpot limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Bt-119
Brown	Brown County Rock Crusher	Brown County Rock Crusher	Lewis	Ordovician	crushed stone—building, road base, resurfacing stone	Bn-1
Carroll	Puskarich Limestone Co.	Puskarich Limestone Co.	Lee	Pennsylvanian	crushed stone—building, road base, resurfacing stone	Cl-183
Clark	American Aggregates Corp.	Springfield #223	Springfield	Cedarville Dolomite (Silurian)	crushed stone—building, road base, resurfacing stone	Ck-1
Clinton	Melvin Stone Co.	Melvin Stone Co.	Richland	Guelph Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, refractory stone; aglime	Cln-1
Crawford	National Lime & Stone Co.	Bucyrus Plant	Holmes	Devonian	crushed stone—riprap, metallurgical stone, building, road base, resurfacing stone, railroad ballast, extenders, fillers; aglime	Cd-1
Darke	American Aggregates Corp.	Fort Jefferson #424	Butler	Cedarville Dolomite (Silurian)	crushed stone—building, road base, resurfacing stone	Dke-1
Delaware	American Aggregates Corp.	Shawnee #225	Concord	Columbus & Delaware Limestones (Devonian)	crushed stone—building, road base, resurfacing stone	Del-4
	National Lime & Stone Co.	Delaware Plant	Scioto	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, metallurgical stone, building, road base, resurfacing stone, railroad ballast; aglime	Del-5
	Owens Stone Co., Inc.	Owens Stone Co.	Scioto	Columbus Limestone (Devonian)	crushed stone—building, road base, resurfacing stone; aglime	Del-3
	Penry Stone Co.	Penry Stone Co.	Radnor		crushed stone—building, road base, resurfacing stone	Del-2

[1]Information for An-3 includes information for An-2 and An-11.

1986 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Erie	Sandusky Crushed Stone Co., Inc.	Sandusky Crushed Stone Co., Inc.	Groton	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, railroad ballast; aglime; stone sand, stone concrete blocks, stone septic tanks	Ee-11
	Wagner Quarries Co.	Wagner Quarries Co.	Perkins	upper Columbus & Delaware Limestones (Devonian)	crushed stone—building, road base, resurfacing stone	Ee-1
Fayette	American Aggregates Corp.	Blue Rock Limestone #222	Perry	Tymochtee Dolomite (Silurian)	crushed stone—building, road base, resurfacing stone	Fe-2
	Melvin Stone Co.	Melvin Stone Co.	Green	Tymochtee Dolomite (Silurian)	crushed stone—stone for portland cement concrete, building, road base, resurfacing stone; aglime	Fe-1
	Sugar Creek Stone Quarry, Inc.	Sugar Creek Stone Quarry, Inc.	Perry, Union	Greenfield Dolomite (Silurian)	crushed stone—building, road base, resurfacing stone; stone for portland cement manufacture; aglime	Fe-3
Franklin	American Aggregates Corp.	Columbus Limestone #221	Marion	Columbus Limestone (Devonian)	crushed stone—building, road base, resurfacing stone	Fn-53
		Marble Cliff #224	Norwich	Columbus & Delaware Limestones (Devonian)	crushed stone—building, road base, resurfacing stone	Fn-2
Greene	American Aggregates Corp.	Cedarville Limestone #423	Cedarville	Cedarville Dolomite (Silurian)	crushed stone—building, road base, resurfacing stone	Ge-17
	Southwestern Portland Cement Co.	Southwestern Portland Cement Co.	Bath	upper Brassfield Limestone (Silurian)	stone for portland cement manufacture	Ge-1
Hancock	National Lime & Stone Co.	Findlay Plant	Liberty	Silurian	crushed stone—riprap, building, road base, resurfacing stone, railroad ballast	Hk-1
	Pifer Stone Co.	Pifer Stone Co.	Madison	Tymochtee Dolomite (Silurian)	crushed stone—other	Hk-4
	Tarbox-McCall Stone Co.	Tarbox-McCall Stone Co.	Liberty	Greenfield Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone	Hk-2
Hardin	Hardin Quarry Co., Inc.	Hardin Quarry Co., Inc.	Pleasant	Tymochtee Dolomite (Silurian)	crushed stone—riprap, building, road base, resurfacing stone; aglime	Hdn-2
	Standard Slag Co.	Forest	Jackson	Silurian	crushed stone—building, road base, resurfacing stone	Hdn-1
Highland	Davon, Inc.	Highland Stone Division	Hamer	Brassfield & Dayton Limestones (Silurian)	crushed stone—riprap, metallurgical stone, stone for portland cement concrete, building, road base, resurfacing stone; aglime	Hd-2
	Marshall Quarry, Inc.	Marshall Quarry, Inc.	Marshall		crushed stone—building, road base, resurfacing stone	Hd-4
	Ohio Asphaltic Limestone Corp.	Ohio Asphaltic Limestone Corp.	Union		crushed stone—riprap, stone for bituminous concrete, building, road base, resurfacing stone; aglime	Hd-3
Holmes	Holmes Limestone Co.	241 Plant	Hardy	Putnam Hill limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Hs-67
		Wayne Mine	Prairie	Putnam Hill limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Hs-79
Jackson	Waterloo Coal Co.	Zoar	Bloomfield, Madison	Vanport limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Jkn-367
Knox	Mickley Gravel Co.	Mickley Gravel Co.	Union		crushed stone—unspecified	Kx-5
Lawrence	Belville Mining Co.	Brady Creek	Washington		crushed stone—riprap	Le-403
Logan	Connolly Construction Co., Inc.	East Liberty Quarry	Perry		crushed stone—unspecified	Lgn-1
	C. E. Duff & Son, Inc.	C. E. Duff & Son, Inc.	Richland		crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone	Lgn-15
	Northwood Stone & Asphalt Co.	Northwood Stone & Asphalt Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone—riprap, stone for bituminous concrete, building, road base, resurfacing stone	Lgn-2

Lucas	The France Stone Co.	Silica	Sylvania	Detroit River Group (Devonian)	crushed stone—riprap, building, road base, resurfacing stone	Ls-3
		Waterville	Waterville	Tymochtee Dolomite (Silurian)	crushed stone—riprap, building, road base, resurfacing stone	Ls-1
	Stoneco	Maumee Quarry	Waynesfield		crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, ice control; stone for portland cement manufacture; aglime	Ls-2
Mahoning	Heiser Stone Co.	Heiser Stone Co.	Smith		crushed stone—building, road base, resurfacing stone	Mg-43
	Honey Creek Stone Co.	Honey Creek Stone Co.	Springfield	Vanport limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Mg-54
	SME Bessemer Cement, Inc.	Quarry #8	Poland	Vanport limestone (Pennsylvanian)	crushed stone—riprap, metallurgical stone, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, railroad ballast; stone for portland cement manufacture; aglime	Mg-608
Marion	J. M. Hamilton & Sons Co.	J. M. Hamilton & Sons Co.	Marion		crushed stone—stone for bituminous concrete, building, road base, resurfacing stone	Mn-2
	National Lime & Stone Co.	Marion Plant	Grand Prairie, Marion	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, building, road base, resurfacing stone, railroad ballast; aglime	Mn-3
	Tri County Limestone Co.	Tri County Limestone Co.	Grand	Silurian	crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone, other; aglime	Mn-1
Mercer	John W. Karch Stone Co.	John W. Karch Stone Co.	Jefferson	Silurian	crushed stone—riprap, building, road base, resurfacing stone; aglime	Mr-1
	Rockford Stone Co.	Rockford Stone Co.	Dublin	Lockport & Guelph Dolomites (Silurian)	crushed stone—building, road base, resurfacing stone; aglime	Mr-2
Miami	Armco, Inc.	Piqua Minerals	Springcreek	Brassfield Limestone, Dayton & Laurel Dolomites (Silurian)	crushed stone—riprap, metallurgical stone, building, road base, resurfacing stone, railroad ballast, fillers; aglime	Mi-1
	Gregory Stone, Inc.	Gregory Quarry	Union		dimension stone	Mi-16
	Ludlow Stone, Inc.	Ludlow Stone, Inc.	Union	Brassfield Limestone (Silurian)	crushed stone—riprap, building, road base, resurfacing stone; aglime	Mi-502
	C. F. Poeppelman Sand & Stone, Inc.	C. F. Poeppelman, Inc.	Newberry	Cedarville Dolomite (Silurian)	crushed stone—stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, cement blocks; aglime	Mi-10
Monroe	Gerald L. Christman	Christman Quarry	Franklin		crushed stone—unspecified	Me-501
Montgomery	American Aggregates Corp.	Phillipsburg Limestone #421	Clay	Cedarville Dolomite (Silurian)	crushed stone—building, road base, resurfacing stone	My-1
		Dayton Limestone #420	Madison	Cedarville Dolomite (Silurian)	crushed stone—building, road base, resurfacing stone	My-23
	Southwestern Portland Cement Co.	Southwestern Portland Cement Co.	Wayne	upper Brassfield Limestone (Silurian)	stone for portland cement manufacture	My-58
Morgan	Central Ohio Coal Co.	Horse Run	Manchester	Benwood limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Mon-600
Muskingum	Central Ohio Coal Co.	Miller Creek	Meigs, Rich Hill	Sewickley limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Mum-896
	Chesterhill Stone Co.	Fultonham #1	Newton	Maxville Limestone (Mississippian)	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, railroad ballast, other; stone for portland cement manufacture; aglime	Mum-106
	Columbia Portland Cement Corp.	Lyle Quarry	Newton	Maxville Limestone (Mississippian)	crushed stone—stone for portland cement concrete	Mum-24
	Sidwell Bros., Inc.	Sidwell Quarry	Newton	Maxville Limestone (Mississippian)	crushed stone—stone for bituminous concrete, building, road base, resurfacing stone	Mum-104
Noble	Central Ohio Coal Co.	Hoskinsville	Brookfield	Benwood limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Ne-147
	King Limestone, Inc.	King Limestone, Inc.	Brookfield	Ewing limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Ne-106

1986 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Ottawa	Edward Kraemer & Sons, Inc.	White Rock Quarry	Allen	Guelph Dolomite (Silurian)	crushed stone—riprap, metallurgical stone, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone; aglime	Oa-6
	Standard Slag Co.	Marblehead	Danbury	Columbus Limestone (Devonian)	crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone	Oa-7
	Stoneco	Rocky Ridge	Benton		crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, ice control; aglime	Oa-14
	USG Industries, Inc.	USG Industries, Inc.	Clay	Silurian	crushed stone—building, road base, resurfacing stone; lime (burned stone)—building, chemical and industrial	Oa-1
Paulding	The France Stone Co.	Paulding	Crane	Tenmile Creek Dolomite (Devonian)	crushed stone—riprap, building, road base, resurfacing stone	Pg-7
	General Portland, Inc.	Paulding Quarry	Crane	Detroit River Group & Dundee Limestone (Devonian)	crushed stone—metallurgical stone; stone for portland cement manufacture	Pg-1
	Stoneco	Auglaize Quarry	Auglaize	Detroit River Group & Dundee Limestone (Devonian)	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, ice control; aglime	Pg-2
Perry	Maxville Stone Co.	Maxville Stone Co.	Monday Creek	Maxville Limestone (Mississippian)	crushed stone—building, road base, resurfacing stone	Py-235
Pickaway	Melvin Stone Co.	Melvin Stone Co.	Perry		crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone; aglime	Pky-4
Pike	Latham Limestone, Inc.	Latham Limestone, Inc.	Mifflin	Greenfield Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone; aglime	Pke-13
Preble	Wysong Stone Co.	Wysong Stone Co.	Twin		crushed stone—riprap, building, road base, resurfacing stone; dimension stone	Pre-5
Putnam	Putnam Stone Co., Inc.	Putnam Stone Co.	Pleasant, Riley	Silurian	crushed stone—riprap, building, road base, resurfacing stone	Pm-2
Sandusky	Gottron Bros. Co.	Gottron Bros. Co.	Sandusky	Silurian	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, other	Sy-5
	Martin Marietta Chemicals	Woodville Quarry	Woodville	Guelph Dolomite (Silurian)	crushed stone—riprap, metallurgical stone; lime (burned stone)—chemical and industrial, refractory	Sy-1
	Ohio Lime Co.	Plant #3	Jackson	Guelph Dolomite (Silurian)	crushed stone—berm stone, other; aglime; lime (burned stone)—chemical and industrial	Sy-4
	Steetley Resources, Inc.	Ohio Lime Co.	Madison	Silurian	crushed stone—metallurgical stone, building, road base, resurfacing stone; aglime; lime (burned stone)—chemical and industrial, other	Sy-8
Seneca	The France Stone Co.	Bloomville	Bloom	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, building, road base, resurfacing stone; dimension stone; aglime	Sa-3
		Flat Rock	Thompson		crushed stone—riprap, building, road base, resurfacing stone; dimension stone; aglime	Sa-1
	North Shore Stone Quarries, Inc.	North Shore Stone Quarries, Inc.	Thompson		crushed stone—riprap; dimension stone	Sa-8
Shelby	Miami River Stone Co.	Miami River Stone Co.	Orange	Cedarville Dolomite (Silurian)	crushed stone—riprap, stone for bituminous concrete, building, road base, resurfacing stone, railroad ballast; aglime	Shy-6

	Sidney Sand & Gravel Co.	Rock Run Quarry	Washington		crushed stone—riprap	Shy-16
	Spring Creek Corp.	River Quarry	Clinton		crushed stone—building, road base, resurfacing stone	Shy-15
Stark	East Ohio Limestone Co.	East Ohio Limestone Co.	Lake	Putnam Hill limestone (Pennsylvanian)	crushed stone—building, road base, resurfacing stone	Sk-663
	Kohl Industries	Black Hawk	Bethlehem, Pike	Putnam Hill & Vanport limestones (Pennsylvanian)	crushed stone—riprap, building, road base, resurfacing stone	Sk-217
Tuscarawas	Fuhrer Farms & Mining	Fuhrer Farms & Mining	Franklin	Pennsylvanian	crushed stone—riprap	Ts-1961
	Kimble Clay & Limestone Co.	Kimble Limestone	Dover	Vanport limestone (Pennsylvanian)	crushed stone—riprap, refractory stone	Ts-1818
	Sugarcreek Clay & Limestone, Inc.	Sugarcreek Clay & Limestone, Inc.	Sugar Creek		crushed stone—building, road base, resurfacing stone	Ts-1928
Union	L. G. Rockhold & Sons, Inc.	L. G. Rockhold & Sons, Inc.	York		crushed stone—stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone; aglime	Un-1
	Union Aggregates Co.	Union Limestone Plant	Millcreek	Columbus Limestone (Devonian)	crushed stone—riprap, building, road base, resurfacing stone; aglime	Un-2
Van Wert	Ridge Township Quarry	Ridge Township Quarry	Ridge	Tymochtee Dolomite (Silurian)	unspecified	Vt-7
	Stoneco	Scott Quarry	Union		crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, ice control; aglime	Vt-3
	Suever Stone Co., Inc.	Delphos Plant	Washington	Tymochtee Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, building, road base, resurfacing stone, railroad ballast, other; other	Vt-1
Vinton	Clinton Stone Co.	Sands Hill Strip	Clinton		crushed stone—building, road base, resurfacing stone; aglime	Vn-174
Warren	American Aggregates Corp.	Lytle Limestone #422	Wayne	Brassfield Limestone (Silurian)	crushed stone—building, road base, resurfacing stone	Wan-35
Washington	Guernsey Limestone Co., Inc.	Guernsey Limestone Co., Inc.	Adams	Benwood & Uniontown limestones (Pennsylvanian)	crushed stone—riprap	Wn-47
Williams	Stoneco	South Montpelier	Superior		crushed stone—stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone; dimension stone	Ws-6[2]
Wood	The France Stone Co.	Custar	Milton		crushed stone—riprap, building, road base, resurfacing stone; aglime	Wd-5
	MacRitchie Materials, Inc.	MacRitchie Materials, Inc.	Perry	Silurian	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, railroad ballast, other	Wd-1
	Stoneco	Lime City Quarry	Perrysburg		crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, ice control; aglime	Wd-6
		Portage Quarry	Portage	Greenfield & Lockport Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, ice control; aglime	Wd-11
Wyandot	McCarthy Stone Quarry	McCarthy Stone Quarry	Pitt	Bass Islands Group (Silurian)	crushed stone—stone for bituminous concrete, building, road base, resurfacing stone	Wt-3
	National Lime & Stone Co.	Carey Plants	Crawford	Silurian	crushed stone—riprap, metallurgical stone, building, road base, resurfacing stone, railroad ballast, extenders, fillers; aglime; lime (burned stone)—chemical and industrial	Wt-1
	Wyandot Dolomite, Inc.	Wyandot Dolomite, Inc.	Crawford	Greenfield & Guelph Dolomites (Silurian)	crushed stone—stone for portland cement concrete, stone for bituminous concrete, building, road base, resurfacing stone, railroad ballast, refractory stone, manufactured sand; aglime	Wt-8

[2]Sales only of limestone—no mining. All material shipped in for sale.

1986 OHIO DIRECTORY OF LAKE ERIE AND MAUMEE RIVER SAND AND GRAVEL DREDGERS

Name of operator	Permitted dredging areas
Erie Sand & Gravel Co.	Fairport, Vermilion-Lorain Inner, Vermilion-Lorain Outer
Osborne Materials Co.	Fairport, Vermilion-Lorain Inner, Vermilion-Lorain Outer
White Bros. Sand, Inc.	Maumee Bay, Maumee River

1986 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Allen	Rockport Sand & Gravel Co., Inc.	Rockport Sand & Gravel Co., Inc.	Monroe	sand—portland cement concrete, building, road construction, resurfacing, filtration gravel—portland cement concrete, road construction, resurfacing, filtration, landscaping	An-14
		Rockport Sand & Gravel Co., Inc.	Monroe	sand—portland cement concrete, building, road construction, resurfacing, filtration gravel—building, filtration, landscaping	An-15
Ashland	Alvin Keiffer Trucking & Excavating	Dinsmore Pit	Jackson	sand—road construction, resurfacing gravel—road construction, resurfacing	Ald-12
	Ries Sand & Gravel	Ries Sand & Gravel	Mohican	sand—foundry, building, road construction, resurfacing, unspecified gravel—building, road construction, resurfacing, unspecified	Ald-9
	Simanton Sand Co.	Simanton Sand Co.	Montgomery	sand—portland cement concrete, building, other gravel—building, road construction, resurfacing, other	Ald-11
	Young's Sand & Gravel Co.	Young's Sand & Gravel Co.	Green	sand—building, road construction, resurfacing, other gravel—building, road construction, resurfacing, other	Ald-7
Ashtabula	Frye Sand & Gravel, Inc.	Frye Sand & Gravel, Inc.	Denmark	gravel—other	Asa-10
	Janson's Soil Service	Janson's Soil Service	Morgan	gravel—driveway use	Asa-14
	Kinsman Sand & Gravel Co.	Kinsman Sand & Gravel Co.	Wayne	sand—unspecified gravel—unspecified	Asa-K[1]
	Nelson Sand & Gravel, Inc.	Nelson Sand & Gravel, Inc.	Kingsville	sand—building, fill	Asa-11
	North Ridge Materials	North Ridge Materials	Kingsville	gravel—construction	Asa-16
	R. W. Sidley, Inc.	Conneaut Pit	Kingsville	sand—bituminous concrete, road construction, resurfacing, ice control gravel—bituminous concrete, road construction, resurfacing, filtration	Asa-15
	Joe Simak & Sons Trucking, Inc.	Penn Line Pit	Kingsville	gravel—farm use, oil and gas production	Asa-S[1]
Athens	Black Top Contracting, Inc.	Black Top #1	Rome	sand—road construction, resurfacing gravel—road construction, resurfacing	As-588
	Lake Hope Asphalt, Inc.	Lake Hope Asphalt, Inc.	York	sand—bituminous concrete, fill gravel—bituminous concrete, driveway use, fill	As-1161
Auglaize	Joseph Sand & Gravel	Joseph Sand & Gravel	Union	gravel—fill	Ae-23
	National Lime & Stone Co.	Wapakoneta Plant	Union	sand—portland cement concrete, building gravel—portland cement concrete	Ae-30
	Quality Ready Mix, Inc.	Quality Ready Mix, Inc.	Pusheta	sand—unspecified gravel—unspecified	Ae-16
Belmont	Tri-State Asphalt Products	Tri-State Asphalt Products	Mead	sand—portland cement concrete, bituminous concrete, ice control gravel—portland cement concrete, bituminous concrete, road construction, resurfacing, fill	Bt-74
Brown	Ruggles Stone Co.	Ruggles Stone Co.	Lewis	sand—road construction, resurfacing gravel—road construction, resurfacing	Bn-5

Butler	Aggregate Services, Inc.	Aggregate Services, Inc.	St. Clair	sand—building, other gravel—road construction, resurfacing, other	Br-36
	American Aggregates Corp.	Fairfield #711	Fairfield	sand—road construction, resurfacing gravel—road construction, resurfacing	Br-35
		Hamilton #710	St. Clair	sand—road construction, resurfacing gravel—road construction, resurfacing	Br-5
	Broshear Gravel Co.	Broshear Gravel Co.	Ross	gravel—paving, fill	Br-48
	Dravo Basic Materials Co., Inc.	Fairfield Plant	Fairfield	sand—road construction, resurfacing gravel—road construction, resurfacing	Br-14
		Ross Plant	Ross	sand—road construction, resurfacing gravel—road construction, resurfacing	Br-29
	Indian Creek Sand & Gravel Co.	Indian Creek Sand & Gravel Co.	Ross	gravel—building, road construction, resurfacing, other	Br-40
	Martin Farms, Inc.	Martin Farms, Inc.	Madison	sand—building, road construction, resurfacing, filtration gravel—road construction, resurfacing	Br-52
	Mecco, Inc.	Mecco, Inc.	Lemon	sand—portland cement concrete, building gravel—building, portland cement concrete	Br-15
	Middletown Sand & Gravel Co.	Middletown Sand & Gravel Co.	Lemon	sand—road construction, resurfacing gravel—building, road construction, resurfacing	Br-1
	Moorman Sand & Gravel Co.	Moorman Sand & Gravel Co.	Madison	sand—road construction, resurfacing, fill gravel—building, road construction, resurfacing, fill	Br-6[2]
	New Miami Sand & Gravel, Inc.	New Miami Sand & Gravel, Inc.	St. Clair	sand—building gravel—building, road construction, resurfacing	Br-3
	Watson Gravel, Inc.	Watson Pit	Fairfield	sand—portland cement concrete, bituminous concrete, building, fill gravel—building, portland cement concrete, road construction, resurfacing	Br-47
	Welch Sand & Gravel, Inc.	Schlichter Pit	Fairfield	sand—building gravel—building	Br-38
Carroll	Oneida Sand & Gravel, Inc.	Oneida Sand & Gravel, Inc.	Brown	sand—road construction, resurfacing gravel—road construction, resurfacing	Cl-204
Champaign	American Aggregates Corp.	Urbana #215	Urbana	sand—road construction, resurfacing gravel—road construction, resurfacing	Cpn-1
	Mechanicsburg Sand & Gravel, Inc.	Mechanicsburg Sand & Gravel, Inc.	Union	sand—unspecified gravel—unspecified	Cpn-22
	Moore's Excavating Co.	Moore's Excavating Co.	Salem	sand—building gravel—building	Cpn-20
Clark	American Aggregates Corp.	Fairborn #413	Bethel	sand—road construction, resurfacing gravel—road construction, resurfacing	Ck-13
	County Line Sand & Gravel	County Line Sand & Gravel	Moorefield	sand—unspecified gravel—unspecified	Ck-27
	Demmy Sand & Gravel	Demmy Sand & Gravel	Mad River	sand—building gravel—fill	Ck-502
	Enon Washed Sand & Gravel Co.	Enon Washed Sand & Gravel	Bethel	sand—portland cement concrete, bituminous concrete, building, unspecified gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, unspecified	Ck-3
	Hilltop Basic Resources, Inc.	Fairborn Aggregate Plant	Bethel	sand—portland cement concrete, bituminous concrete, building gravel—portland cement concrete, bituminous concrete, fill	Ge-4[3]
	Springfield Sand & Gravel Co.	Springfield Sand & Gravel Co.	Springfield	sand—portland cement concrete, bituminous concrete, building, other gravel—building, portland cement concrete, bituminous concrete, other	Ck-25
Clermont	The Brewer Company	Plant #11	Union	sand—bituminous concrete gravel—bituminous concrete	Ct-9
	Kipp's Gravel Co., Inc.	Kipp's Gravel Co., Inc.	Stonelick	sand—unspecified gravel—unspecified	Ct-7
Coshocton	Apache Aggregate & Paving Co.	Apache Aggregate & Paving Co.	Keene	sand—road construction, resurfacing, unspecified gravel—road construction, resurfacing, unspecified	Cn-783
	Boyd Gravel Co.	Boyd Gravel Co.	Bethlehem	sand—road construction, resurfacing gravel—road construction, resurfacing	Cn-694

[1]No mine number has been assigned by the Division of Mines.
[2]This mine was operated 1st and 2nd quarters 1986 by Moorman Sand & Gravel Co. and 3rd and 4th quarters by Weidle Sand & Gravel, Inc.
[3]See also Greene County.

1986 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Crawford	Gibson Sand & Gravel Co.	Gibson Sand & Gravel	Jefferson	sand—fill gravel—fill	Cd-3
Cuyahoga	Silver Arrow Systems, Inc.	Silver Arrow Systems, Inc.	Village of Glenwillow	sand—fill	Cya-26
Darke	Foureman's Sand & Gravel, Inc.	Foureman's Sand & Gravel, Inc.	Greenville	sand—ice control, unspecified gravel—farm use, driveway use, unspecified	Dke-4
	Hollinger Gravel Plant	Hollinger Gravel Plant	Harrison	gravel—ballast, farm use, fill	Dke-10
Defiance	Hillsdale Sand & Gravel, Inc.	Hillsdale Sand & Gravel	Farmer	gravel—road construction, resurfacing	De-2
Erie	Elmer Borchardt, Inc.	Elmer Borchardt, Inc.	Margaretta	gravel—building, shore buildup	Ee-18
	Jarrett Sand Co.	Jarrett Sand Co.	Groton	sand—fill	Ee-29
	Keener Sand & Clay Co.	Huron Plant	Huron	sand—foundry	Ee-5
	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Milan	sand—other	Ee-24
	Miller Sand Co.	Miller Sand Co.	Margaretta	sand—fill	Ee-28
Fairfield	Lancaster Sand & Gravel Co.	Lancaster Sand & Gravel Co.	Berne	sand—portland cement concrete, bituminous concrete, building, fill gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Fd-13
Franklin	Agg Rok Materials	Agg Rok	Franklin	sand—portland cement concrete, bituminous concrete gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Fn-36
	American Aggregates Corp.	Lockbourne #213	Hamilton	sand—road construction, resurfacing gravel—road construction, resurfacing	Fn-23
		Columbus #210	Marion	sand—road construction, resurfacing gravel—road construction, resurfacing	Fn-6
	Big Walnut Sand & Gravel Co.	Big Walnut Sand & Gravel Co.	Hamilton, Madison	gravel—building	Fn-14
	J. P. Sand & Gravel Co.	J. P. Sand & Gravel Co.	Hamilton	sand—building gravel—building	Fn-52
	L & M Excavators	Westerville Industrial Park	Blendon	sand—building gravel—building	Fn-54
	Masons Sand & Gravel Co.	Masons Sand & Gravel	Hamilton	sand—building gravel—building	Fn-11
	Olen Corp.	Olen Corp.	Brown	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing	Fn-43
Gallia	Keener Sand & Clay Co.	Gallia Plant	Springfield	sand—foundry	Ga-507
Geauga	Haueter Sand & Gravel Co.	Haueter Sand & Gravel Co.	Burton, Newbury	sand—portland cement concrete, building gravel—building, road construction, resurfacing, filtration, other	Gea-29
	Teague Gravel Co., Inc.	Teague Gravel Co., Inc.	Newbury	sand—building gravel—building, road construction, resurfacing	Gea-35
Greene	American Aggregates Corp.	Xenia #414	Beaver Creek	sand—road construction, resurfacing gravel—road construction, resurfacing	Ge-33
	Hilltop Basic Resources, Inc.	Fairborn Aggregate Plant	Bath	sand—portland cement concrete, bituminous concrete, building gravel—portland cement concrete, bituminous concrete, fill	Ge-4[4]
	Moraine Materials, Inc.	Moraine Materials, Inc.	Spring Valley	sand—building gravel—building, road construction, resurfacing, filtration	Ge-38
	Phillips Sand & Gravel	Phillips Sand & Gravel	Beaver Creek	sand—unspecified gravel—unspecified	Ge-36
	Xenia Sand, Gravel, & Asphalt Paving Co.	Xenia Sand, Gravel, & Asphalt Paving Co.	Xenia	sand—building, road construction, resurfacing, fill, sewers gravel—road construction, filtration	Ge-10
Hamilton	American Aggregates Corp.	Harrison #712	Harrison	sand—road construction, resurfacing gravel—road construction, resurfacing	Hmn-37
		Kilby Rd. #713	Whitewater	sand—road construction, resurfacing gravel—road construction, resurfacing	Hmn-AAC[5]
	Ashcraft Sand & Gravel	Ashcraft Sand & Gravel	Whitewater	sand—fill, unspecified gravel—building, fill unspecified	Hmn-54
	Barrett Paving Materials, Inc.	Barrett Paving Materials, Inc.	Crosby	sand—bituminous concrete, fill, other gravel—bituminous concrete, fill, other	Hmn-44

	James Bunnell, Inc.	James Bunnell, Inc.	Harrison	sand—unspecified gravel—unspecified	Hmn-50
		James Bunnell, Inc.	Whitewater	sand—unspecified gravel—unspecified	Hmn-59
	Dravo Basic Materials Co., Inc.	Newtown Plant	Anderson	sand—road construction, resurfacing gravel—road construction, resurfacing	Hmn-11
		Cleves Plant	Harrison	sand—road construction, resurfacing gravel—road construction, resurfacing	Hmn-62
		Cleves Plant	Miami	sand—road construction, resurfacing gravel—road construction, resurfacing	Hmn-3
		Camp Dennison Plant	Symmes	sand—road construction, resurfacing gravel—road construction, resurfacing	Hmn-5
		Cleves Plant	Whitewater	sand—road construction, resurfacing gravel—road construction, resurfacing	Hmn-68
	Eaton Sand & Gravel, Inc.	Eaton Sand & Gravel, Inc.	Whitewater	sand—bituminous concrete, road construction, resurfacing gravel—bituminous concrete, road construction, resurfacing	Hmn-46
	Harrison Sand & Gravel Co.	Harrison Sand & Gravel Co.	Harrison	sand—building, road construction, resurfacing gravel—building, bituminous concrete	Hmn-17
	Hornsby Sand & Gravel Co.	Hornsby Sand & Gravel Co.	Harrison	sand—road construction, resurfacing gravel—building	Hmn-45
	Rack Sand, Inc.	Rack Sand, Inc.	Mill Creek	sand—unspecified gravel—unspecified	Hmn-10
	Three Rivers Sand & Gravel, Inc.	Three Rivers Sand & Gravel, Inc.	Miami	gravel—other	Hmn-28
	Watson Gravel, Inc.	Harrison Pit	Whitewater	sand—portland cement concrete, bituminous concrete, fill gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Hmn-60
	Welch Sand & Gravel, Inc.	East Miami Pit	Colerain	sand—building gravel—building	Hmn-48
		Fernald Pit	Crosby	gravel—building	Hmn-42
Henry	Gerken Materials, Inc.	Gerken Materials, Inc.	Liberty	sand—road construction, resurfacing	Hy-5
Hocking	Hocking County Engineer	Hocking Co. Gravel Pit	Green	sand—road construction, resurfacing gravel—road construction, resurfacing	Hg-296
	Hocking Valley Concrete, Inc.	Hocking Valley Concrete	Green	sand—portland cement concrete, building, road construction, resurfacing, filtration, fill gravel—building, portland cement concrete, road construction, resurfacing, filtration, fill	Hg-262
Holmes	Bros. Sand & Gravel Co.	Bros. Sand & Gravel Co.	Hardy	sand—road construction, resurfacing, unspecified gravel—road construction, resurfacing, unspecified	Hs-82
	Feikert Sand & Gravel, Inc.	Feikert Sand & Gravel, Inc.	Salt Creek	sand—portland cement concrete, building, fill gravel—building, portland cement concrete, road construction, resurfacing, filtration, fill	Hs-511
Huron	Price Sand & Gravel	Price Sand & Gravel Pit #1	Norwalk	sand—portland cement concrete, building, road construction, resurfacing, filtration, other gravel—building	Hrn-1
Knox	Fredericktown Sand & Gravel Co.	Fredericktown Sand & Gravel Co.	Middlebury	sand—portland cement concrete, building, road construction, resurfacing, unspecified gravel—building, portland cement concrete, road construction, resurfacing, unspecified	Kx-13
	Goodwin Sand & Gravel, Inc.	Goodwin Sand & Gravel, Inc.	Clinton	sand—bituminous concrete, road construction, resurfacing, other gravel—building, portland cement concrete, road construction, resurfacing, other	Kx-7
	Kokosing Materials, Inc.	KMI #1	Morris	sand—portland cement concrete, bituminous concrete gravel—portland cement concrete, bituminous concrete, road construction, resurfacing	Kx-16
	Mickley Gravel Co.	Mickley Gravel Co.	Union	sand—road construction, resurfacing gravel—road construction, resurfacing unspecified	Kx-5
	Purdy Sand & Gravel Co.	Purdy Sand & Gravel Co.	Clinton	sand—building, road construction, resurfacing, other gravel—building, road construction, resurfacing, other	Kx-3
	Small's Sand & Gravel, Inc.	Small's Sand & Gravel, Inc.	Harrison	sand—other gravel—other	Kx-15
		Small's Sand & Gravel, Inc.	Pleasant	sand—other	Kx-8

[4]See also Clark County.
[5]No mine number has been assigned by the Division of Mines.

1986 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name operator	Name of pit	Township	Type and principal use	State mine number
Lake	R. W. Sidley, Inc.	Painesville Plant	Painesville	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing, filtration gravel—building, bituminous concrete, road construction, resurfacing, filtration, ice control	Lke-7
Lawrence	Becky Lane Trucking, Inc.	Becky Lane Sand	Perry	sand—fill	Le-430
	Burlington Sand & Gravel Co.	Burlington Sand & Gravel	Perry	sand—fill	Le-426
	D & D Sand Bank Co.	D & D Sand Bank	Perry	sand—fill	Le-445
	Economy Sand Co.	Economy Sand Co.	Rome	sand—filtration, other	Le-441
Licking	Alexandria Materials Co.	Alexandria Pit	St. Albans	sand—bituminous concrete, building, road construction, resurfacing gravel—bituminous concrete, road construction, resurfacing	Lg-8[6]
	American Aggregates Corp.	Newark #214	Newark	sand—road construction, resurfacing gravel—road construction, resurfacing	Lg-2
	Dry Creek Gravel Co.	Waterworks Dam Dredging Project	Newark	sand—building gravel—building	Lg-502
		Dry Creek Gravel Co.	Newton	sand—unspecified gravel—unspecified	Lg-7
		Dry Creek Gravel Co.	Newton	sand—road construction, resurfacing, unspecified gravel—road construction, resurfacing, unspecified	Lg-DC[7]
		Dry Creek Farms	Washington	sand—road construction, resurfacing, unspecified gravel—road construction, resurfacing, unspecified	Lg-31
	Van Wey Sand & Gravel, Inc.	Van Wey Sand & Gravel, Inc.	Newton	sand—foundry, building, road construction, resurfacing gravel—building, road construction, resurfacing, ice control	Lg-10
	York Road Gravel Co.	York Road Gravel Co.	Etna	sand—other gravel—other	Lg-38
Logan	C. E. Duff & Son, Inc.	Duff Sand Co.	Washington	sand—portland cement concrete, building, road construction, resurfacing, other	Lgn-31
	Neer's Sand & Gravel	Neer's Sand & Gravel	Union	sand—unspecified gravel—unspecified	Lgn-6
Lorain	Belu & Son Paving, Inc.	Belu Sand Pit	Henrietta	sand—fill	Ln-12
Lucas	Maumee Haulers, Inc.	Nebraska Pit	Springfield	sand—building	Ls-20
	Seaway Sand & Stone, Inc.	Seaway Sand & Stone	Swanton	sand—building	Ls-13
	Stoneco	Maumee Quarry	Waynesfield	sand—road construction, resurfacing	Ls-2[8]
Mahoning	Neiheisel Sand & Gravel	Neiheisel Sand & Gravel	Green	sand—building gravel—building	Mg-NSG[7]
Marion	Penry Stone Co.	Penry Stone Co.	Prospect	sand—building gravel—building	Mn-4
	Union Aggregates Co.	Prospect Sand & Gravel Plant	Prospect	sand—building, filtration gravel—other	Mn-10
Medina	Baker Sand, Inc.	Baker Sand, Inc.	Harrisville, Westfield	sand—road construction, resurfacing gravel—road construction, resurfacing	Ma-4
		Baker Sand, Inc.	Westfield	sand—building, road construction, resurfacing, fill gravel—road construction, resurfacing	Ma-20
	Ramsier Sand & Gravel	Ramsier Sand & Gravel	Westfield	sand—driveway use gravel—driveway use	Ma-12
	Seville Sand & Gravel, Inc.	Seville Sand & Gravel, Inc.	Harrisville	sand—bituminous concrete, building, other gravel—building, road construction, resurfacing	Ma-22
Meigs	Dravo Basic Materials Co., Inc.	Apple Grove Plant	Letart	sand—road construction, resurfacing gravel—road construction, resurfacing	Ms-205
	Humphrey Farms	Vivian Humphrey	Olive	gravel—other	Ms-295
	Meigs County Commissioners	Meigs County Pit	Letart	sand—road construction, resurfacing gravel—road construction, resurfacing	Ms-301
	Richards & Son, Inc.	Richards & Son, Inc.	Letart	sand—bituminous concrete, building gravel—building, bituminous concrete, road construction, resurfacing	Ms-298
	Weber Sand & Gravel	Weber Sand & Gravel	Olive	sand—road construction, resurfacing gravel—road construction, resurfacing	Ms-287

Miami	Eldean Gravel Co.	Eldean Gravel Co.	Concord	sand—unspecified gravel—unspecified	Mi-2
	Ernst Gravel Co.	Ernst Gravel Co.	Springcreek	sand—unspecified gravel—unspecified	Mi-6
	New Carlisle Sand & Gravel Co.	New Carlisle Sand & Gravel Co.	Bethel	sand—fill gravel—fill	Mi-501
	Ticon Corp.	Ticon Corp.	Washington	sand—road construction, resurfacing gravel—road construction, resurfacing	Mi-T[7]
	Troy Gravel Co.	Troy Gravel Co.	Concord	sand—unspecified gravel—unspecified	Mi-3
	Valley Gravel Co.	Valley Gravel Co.	Monroe	sand—unspecified gravel—unspecified	Mi-8
	John Wise Gravel Co.	John Wise Gravel Co.	Newberry	sand—building, farm use gravel—building, farm use	Mi-9
	Woodville Concrete Corp.	Woodville Concrete Corp.	Newton	sand—building gravel—building	Mi-4
Montgomery	American Aggregates Corp.	Rip Rap Road #416	Wayne	sand—road construction, resurfacing gravel—road construction, resurfacing	My-66
	Broadway Sand & Gravel, Inc.	Broadway Sand & Gravel, Inc.	City of Moraine	sand—building, road construction, resurfacing gravel—building	My-65
	Carpenter's Excavating	Carpenter's Excavating	City of Moraine	sand—fill	My-67
	Englewood Sand & Gravel Co., Inc.	Englewood Sand & Gravel	Butler	sand—portland cement concrete, building gravel—building, portland cement concrete	My-5
		Englewood Sand & Gravel	Butler	sand—portland cement concrete, building gravel—building, portland cement concrete	My-64
	H & H Utilities Co.	H & H Gravel	Miami	sand—other gravel—other	My-68
	Haas Gravel Co.	Haas Gravel Co.	Butler	gravel—road construction, resurfacing	My-30
	Hilltop Basic Resources, Inc.	West Carrollton Aggregate Plant	Jefferson, Miami	sand—portland cement concrete, bituminous concrete, building gravel—portland cement concrete, bituminous concrete, fill	My-19
	Miller Bros. Gravel, Inc.	Miller Bros. Gravel, Inc.	Butler	sand—portland cement concrete, building, masonry, other gravel—building, portland cement concrete, road construction, resurfacing, filtration, other	My-52
	Northmont Sand & Gravel Co.	Northmont Sand & Gravel Co.	Randolph	sand—building gravel—building	My-49
	Partin Sand & Gravel	Partin Sand & Gravel	Wayne	gravel—other	My-55
	Tipp Stone, Inc.	Tipp Stone, Inc.	Butler	sand—building, road construction, resurfacing, fill gravel—building, road construction, resurfacing, fill	My-61
	Weidle Sand & Gravel, Inc.	Weidle Sand & Gravel, Inc.	German	sand—building gravel—building	My-41
Morgan	Chesterhill Stone Co.	Plant #2	Windsor	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing, filtration gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, filtration	Mon-588
Morrow	Chesterville Sand & Gravel Co., Inc.	Chesterville Sand & Gravel Co., Inc.	Chester	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing, filtration, ice control, landscaping	Mw-10
Muskingum	Cox Gravel, Inc.	Jennings	Cass	sand—portland cement concrete, bituminous concrete, building, filtration gravel—portland cement concrete, bituminous concrete, road construction, resurfacing	Mum-799
		Prospect	Cass	sand—portland cement concrete, bituminous concrete, building, filtration, ice control gravel—portland cement concrete, bituminous concrete, road construction, resurfacing	Mum-863
	Lazy Acre Farms, Inc.	Lazy Acre Farms, Inc.	Harrison	sand—building gravel—building, road construction, resurfacing	Mum-261
	Salt Creek Materials, Inc.	Salt Creek Materials, Inc.	Washington	sand—unspecified gravel—unspecified	Mum-216
Pickaway	Sturm & Dillard Co.	Sturm & Dillard Co.	Circleville	sand—unspecified gravel—unspecified	Pky-1

[6]This mine was operated 1st through 3rd quarters 1986 by Alexandria Materials Co. and 4th quarter by Newark Asphalt Co.
[7]No mine number has been assigned by the Division of Mines.
[8]Sales only, no production.

1986 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Pike	C.D. Materials	Piketon Pit	Scioto	sand—bituminous concrete gravel—road construction, resurfacing	Pke-26
	Chattin Concrete	Chattin Concrete	Seal	sand—portland cement concrete, building, unspecified gravel—building, filtration, unspecified	Pke-23
	Gregory Materials Co.	Plant #1	Scioto	sand—portland cement concrete, bituminous concrete, unspecified gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, filtration, fill	Pke-30
	Standard Slag Co.	Cutlip	Scioto	sand—portland cement concrete, bituminous concrete, building gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, ice control	Pke-24
Portage	Beck Sand & Gravel, Inc.	Beck Sand & Gravel, Inc.	Shalersville	sand—unspecified gravel—unspecified	Pe-50
	Karl Brugmann Sand & Gravel	Karl Brugmann Sand & Gravel	Shalersville	sand—building gravel—building	Pe-15
	Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville	sand—unspecified gravel—unspecified	Pe-9
	Charlestown Sand & Gravel Co.	Charlestown Sand & Gravel	Charlestown	sand—unspecified gravel—unspecified	Pe-17
	R. A. Cruise Sand & Gravel, Inc.	R. A. Cruise Sand & Gravel, Inc.	Franklin, Ravenna	sand—building, road construction, resurfacing gravel—building	Pe-45
	Hilltop Aggregate, Inc.	Hilltop Aggregate, Inc.	Suffield	sand—other gravel—other	Pe-56
	Warner L. Hughes, Inc.	Hughes Pit	Suffield	sand—fill	Pe-76
	Hugo Sand Co.	Hugo Sand Co.	Franklin	sand—building, road construction, resurfacing, other gravel—building, road construction, resurfacing, other	Pe-10
	Jefferson Materials Co.	Howitt	Streetsboro	sand—bituminous concrete, road construction, resurfacing, filtration gravel—road construction, resurfacing, filtration	Pe-63
	Karg Sand & Gravel Co.	Karg Sand & Gravel Co.	Brimfield	sand—sewers, water lines, fill gravel—driveways	Pe-77
	Lakeside Sand & Gravel Co.	Lakeside Sand & Gravel	Shalersville	sand—portland cement concrete gravel—building	Pe-40
	Miller Sand & Gravel Co.	Miller Sand & Gravel	Windham	sand—building, fill gravel—building, fill	Pe-39
	Northern Ohio Materials, Inc.	Northern Ohio Materials, Inc.	Streetsboro	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing	Pe-85
	Schloss Paving Co.	Schloss Paving Co.	Mantua	sand—bituminous concrete gravel—bituminous concrete	Pe-60
	Sober Sand & Gravel Co.	Sober Sand & Gravel Co.	Rootstown	sand—unspecified	Pe-18
	Solon Excavators Sand & Gravel, Inc.	Solon Excavators Sand & Gravel, Inc.	Shalersville	sand—building, road construction, resurfacing gravel—building	Pe-36
	Standard Slag Co.	Shalersville	Shalersville	sand—portland cement concrete, bituminous concrete, building gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Pe-68
	Twin Lakes Sand, Inc.	Twin Lakes Sand, Inc.	Shalersville	sand—road construction, resurfacing gravel—road construction, resurfacing	Pe-59[9]
		Twin Lakes Sand, Inc.	Streetsboro	sand—road construction, resurfacing gravel—road construction, resurfacing	Pe-67[9]
Preble	Wysong Gravel Co.	Camden Plant	Somers	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Pre-4
		West Alexandria Plant	Twin	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Pre-6
Richland	D. H. Bowman & Sons, Inc.	D. H. Bowman & Sons, Inc.	Jefferson	sand—portland cement concrete, fill, pipe bedding, other gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, filtration, fill, pipe bedding, other	Rd-4
	John L. Garber Materials, Inc.	J. L. Garber Materials, Inc.	Troy	sand—building, gravel—building	Rd-14

	Mohican Materials Co.	Mohican Materials Co.	Troy	gravel—building	Rd-10
	Mohican Sand & Gravel, Inc.	Mohican Sand & Gravel, Inc.	Monroe	sand—building, road construction, resurfacing gravel—building, bituminous concrete, road construction, resurfacing, fill	Rd-5
Ross	Elm Spring Farm	Elm Spring Farm	Union	sand—building gravel—building	Rs-26
	Haubeil & Sons Asphalt & Materials, Inc.	Haubeil & Sons	Springfield	sand—bituminous concrete, building gravel—bituminous concrete, road construction, resurfacing	Rs-24
	R & R Aggregates, Inc.	R & R Aggregates, Inc.	Huntington	sand—fill gravel—building	Rs-23
	Three Locks Construction Co.	N-3	Scioto	sand—portland cement concrete, bituminous concrete, building, ice control, fill gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, filtration, other	Rs-19
Scioto	E. E. Blair Construction Co.	E. E. Blair Construction Co.	Porter	sand—road construction, resurfacing gravel—building	So-98
	Earl H. Schilling & Sons, Inc.	Earl H. Schilling & Sons, Inc.	Green	sand—building	So-78
	Scioto Valley Resources	Scioto Valley Resources Division	Valley	sand—portland cement concrete, masonry gravel—road construction, resurfacing	So-100
	Standard Slag Co.	Haverhill	Green	sand—portland cement concrete, bituminous concrete gravel—building, road construction, resurfacing	So-79
Seneca	Wright Sand	Wright Sand	Eden	sand—fill gravel—fill	Sa-11
Shelby	Ernst Gravel Co.	Houston Pit	Loramie	sand—unspecified gravel—unspecified	Shy-1
"	Fleckenstein Farm Gravel Pit	Fleckenstein Farm Gravel Pit	McLean	sand—fill gravel—fill	Shy-12
	Sidney Sand & Gravel Co.	Milligan & Milligan-Washington Twp. Pit	Washington	sand—other gravel—other	Shy-13
	Spring Creek Corp.	Pence Deposit	Washington	sand—portland cement concrete, bituminous concrete, building gravel—building, portland cement concrete, bituminous concrete	Shy-11
		Jones Deposit	Washington	sand—portland cement concrete gravel—portland cement concrete	Shy-18
Stark	Canton Aggregate	Canton Aggregate	Jackson	sand—portland cement concrete, bituminous concrete, other gravel—portland cement concrete, bituminous concrete, other	Sk-689
		Canton Aggregate	Plain	sand—portland cement concrete, bituminous concrete, other gravel—portland cement concrete, bituminous concrete, other	Sk-681
	A. J. Diana Sons, Inc.	Neidert Pit	Lawrence	sand—unspecified gravel—unspecified	Sk-694
	Hartville Sand & Gravel, Inc.	Hartville Sand & Gravel	Lake	sand—portland cement concrete, building gravel—building, portland cement concrete, other	Sk-182
	Heiser Sand & Gravel	Heiser Sand & Gravel	Jackson	sand—building, fill gravel—building, road construction, resurfacing, fill	Sk-688
		Heiser Sand & Gravel	Plain	sand—building gravel—building, road construction, resurfacing, fill	Sk-206
	Massillon Washed Gravel Co.	Massillon Washed Gravel Co.	Bethlehem	sand—bituminous concrete, building, road construction, resurfacing gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Sk-607
	Oster Sand & Gravel, Inc.	Oster Sand & Gravel, Inc.	Perry	sand—bituminous concrete, building, ice control, fill gravel—building, bituminous concrete, road construction, resurfacing, ice control, fill	Sk-165
	Stone Products, Inc.	Stone Products, Inc.	Perry	gravel—road construction, resurfacing	Sk-190
Summit	Flesher Sand & Gravel, Inc.	Flesher Sand & Gravel, Inc.	Norton	sand—foundry, building, road construction, resurfacing, fill gravel—building, landscaping, driveway use	St-52
	H. M. Miller Construction Co.	Krumroy Pit	Springfield	sand—fill gravel—fill	St-46
	Northern Ohio Materials, Inc.	Northern Ohio Materials, Inc.	Hudson	sand—building, road construction, resurfacing	St-41

[9]This mine was operated 1st and 2nd quarters 1986 by Twin Lakes Sand, Inc. and 3rd and 4th quarters by S & S Aggregate.

1986 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Summit (con't)	Portage Lakes Sand & Gravel Co.	Portage Lakes Sand & Gravel Co.	Coventry	sand—building gravel—building	St-53
		Portage Lakes Sand & Gravel Co. Plant #4	Green	sand—building, unspecified gravel—building, unspecified	St-33
	Riverside Sand & Gravel Co., Inc.	Riverside Sand & Gravel (Acken)	Stow	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing	St-24
	Rubber City Sand & Gravel Co.	Knight Plant	Green	sand—building gravel—building	St-9
	Twin Lakes Sand, Inc.	Twin Lakes Sand, Inc.	Coventry	sand—road construction, resurfacing gravel—road construction, resurfacing	St-44[10]
Tuscarawas	Benco Leasing, Inc.	Goshen 416 Site	Goshen	sand—portland cement concrete, building, pipe bedding gravel—building, portland cement concrete, driveway use	Ts-1976
	Oster Sand & Gravel, Inc.	Oster Sand & Gravel, Inc.	Lawrence	sand—bituminous concrete, building, ice control, fill gravel—building, bituminous concrete, road construction, resurfacing, ice control, fill	Ts-1852
	Soehnlen Bros. Sand & Gravel Co.	Soehnlen Bros. Sand & Gravel	Wayne	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing	Ts-1826
	Spring Industries	County Line Plant	Franklin	gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Ts-1788
		Midvale Pit	Goshen	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Ts-1771
	Stewart & Reichman, Inc.	Stewart & Reichman, Inc.	Warwick	sand—building, road construction, resurfacing gravel—road construction, resurfacing	Ts-111
	Stocker Sand & Gravel Co.	Stocker Sand & Gravel Co.	Clay	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing	Ts-69
		Stocker Sand & Gravel Co.	Clay	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing	Ts-125
Warren	American Aggregates Corp.	Franklin #417	Franklin	sand—road construction, resurfacing gravel—road construction, resurfacing	Wan-38
	Bellbrook Gravel Co.	Bellbrook Gravel Co.	Wayne	sand—unspecified gravel—unspecified	Wan-24
	Daniel L. Browning	Riverside Sand & Gravel	Salem	gravel—road construction, resurfacing	Wan-B[11]
	Dravo Basic Materials Co., Inc.	South Lebanon Plant	Union	sand—road construction, resurfacing gravel—road construction, resurfacing	Wan-41
	L & I Trucking & Construction, Inc.	L & I Trucking & Construction, Inc.	Hamilton	sand—other gravel—other	Wan-8
	Morrow Gravel Co.	Morrow Gravel Co.	Salem, Union	sand—road construction, resurfacing gravel—road construction, resurfacing	Wan-44
	Carl E. Oeder & Sons Sand & Gravel	Carl E. Oeder	Union	sand—other, unspecified gravel—other, unspecified	Wan-41
	Watson Gravel, Inc.	Mason Pit	Union	sand—building, fill gravel—building, road construction, resurfacing	Wan-10
		Todorov Pit	Union	sand—building, road construction, resurfacing gravel—building, road construction, resurfacing	Wan-22
Washington	Briggs Sand & Gravel, Inc.	Briggs Sand & Gravel, Inc.	Warren	sand—building gravel—road construction, resurfacing	Wn-508
	Chesterhill Stone Co.	Plant #3	Adams	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing, filtration gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, filtration	Wn-56
	Trout Sand & Gravel Co.	Trout Sand & Gravel Co.	Warren	sand—building gravel—building	Wn-510
	Union Slag Corp.	Union Slag Plant #3	Muskingum	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing, filtration, fill	Wn-43
		Union Slag Plant #2	Muskingum	sand—portland cement concrete, bituminous concrete, building, road construction, resurfacing, filtration gravel—portland cement concrete, bituminous concrete, road construction, resurfacing, filtration	Wn-44

Wayne	Prairie Lane Sand & Gravel Co.	Prairie Lane Sand & Gravel Co.	Franklin	sand—unspecified gravel—unspecified	We-11
	Rupp Construction, Inc.	Rupp Construction, Inc.	Baughman	sand—portland cement concrete, bituminous concrete, building gravel—building, portland cement concrete, bituminous concrete	We-7
	Zollinger Sand & Gravel Co.	Zollinger Sand & Gravel Co.	Chippewa	sand—unspecified gravel—unspecified	We-15
Williams	Stoneco	South Montpelier	Superior	sand—bituminous concrete, building gravel—building, portland cement concrete, bituminous concrete, road construction, resurfacing	Ws-6
	Weber Sand & Gravel, Inc.	Weber Sand & Gravel, Inc.	St. Joseph	sand—portland cement concrete, building, filtration gravel—building, farm use, fill	Ws-11
Wyandot	Amert Gravel Co.	Amert Gravel Co.	Eden	sand—portland cement concrete, building, fill gravel—building, road construction, resurfacing, fill	Wt-4
	H & M Sand & Gravel Co.	H & M Sand & Gravel Co.	Eden	sand—portland cement concrete, bituminous concrete, road construction, resurfacing, building, filtration, drainage gravel—building, filtration, fill	Wt-5
		H & M Sand & Gravel Co.	Eden	sand[12]	Wt-15
	Kirby's Sand & Gravel, Inc.	Kirby's Sand & Gravel	Eden	sand—building, filtration gravel—building, portland cement concrete, bituminous concrete, filtration	Wt-17

[10]This mine was operated 1st and 2nd quarters 1986 by Twin Lakes Sand, Inc. and 3rd and 4th quarters by S & S Aggregate.
[11]No mine number has been assigned by the Division of Mines.
[12]Production only, no sales.

1986 OHIO DIRECTORY OF SANDSTONE/CONGLOMERATE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of quarry	Township	Geological unit	Type and principal use	State mine number
Coshocton	Briar Hill Stone Co.	Quarry #15	Jefferson	Massillon (Pennsylvanian)	dimension stone—rough architectural	Cn-788
		Quarry #26	Monroe	Massillon (Pennsylvanian)	dimension stone—refractory, rough architectural	Cn-13
		Quarry #32	Monroe	Massillon (Pennsylvanian)	dimension stone—rough architectural	Cn-686
		Quarry #24	Monroe	Massillon (Pennsylvanian)	dimension stone—rough architectural	Cn-692
		Quarry #54	Monroe	Massillon (Pennsylvanian)	dimension stone—rough architectural	Cn-809
		Quarry #55	Monroe	Massillon (Pennsylvanian)	dimension stone—rough architectural	Cn-815
		Quarry #3	Tiverton	Massillon (Pennsylvanian)	dimension stone—rough architectural	Cn-659
Cuyahoga	Boyas Excavating, Inc.	Boyas' Valley View Quarry	Independence	Bedford (Mississippian)	crushed or broken stone—riprap	Cya-BE[1]
Erie	Cleveland Quarries Co.	Birmingham Quarry	Florence	Berea (Mississippian)	dimension stone—rubble, grindstones, rough architectural, finished, curbing, flagging	Ee-21
Geauga	Best Sand Corp.	Best Sand Corp.	Munson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—foundry sand, glass sand, metallurgical pebble, refractory, riprap, aggregate, silica flour, polishing/grinding sand, fire and furnace sand, engine sand, frac sand, trap sand, sandblasting, ice control	Gea-3
	Best Silica Co.	Best Silica Co.	Bainbridge	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—foundry sand, riprap, aggregate, fire and furnace sand, trap sand dimension stone—flagging	Gea-36
	R. W. Sidley, Inc.	Thompson Pit	Thompson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—foundry sand, metallurgical pebble, refractory, aggregate, fire and furnace sand, engine sand, concrete sand, sandblasting dimension stone—rough construction, grindstones, rough architectural, fill	Gea-1
Huron	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Townsend	Berea (Mississippian)	crushed or broken stone—riprap	Hrn-8
Knox	Briar Hill Stone Co.	Quarry #6	Jefferson	Massillon (Pennsylvanian)	dimension stone—rough architectural	Kx-12
	Central Silica Co.	Millwood Sand Division	Union	Black Hand (Mississippian)	crushed or broken stone—foundry sand, glass sand, silica flour, engine sand, frac sand, other	Kx-1
Lorain	Cleveland Quarries Co.	Amherst Quarries	Amherst	Berea (Mississippian)	crushed or broken stone—aggregate dimension stone—rough construction, rubble, grindstones, finished, curbing, flagging	Ln-3
Mahoning	Gwin Contracting Co.	Gwin Contracting Co.	Milton	Sharon (Pennsylvanian)	crushed or broken stone—other	Mg-62
Perry	Central Silica Co.	Central Silica Co.	Hopewell	Massillon (Pennsylvanian)	crushed or broken stone—foundry sand, glass sand, silica flour, other	Py-202
Ross	Southern Silica, Inc.	Southern Silica, Inc.	Jefferson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—foundry sand, glass sand, engine sand, industrial sand, filtration sand dimension stone—rough construction, other	Rs-16
Scioto	Waller Bros. Stone Co.	Inskeep Quarry	Rush	Buena Vista (Mississippian)	dimension stone—rough construction	So-48
		Crabtree Quarry	Morgan		dimension stone—rough construction	So-76
Stark	Kohl Industries	Black Hawk	Bethlehem, Pike		crushed or broken stone—riprap	Sk-217
Trumbull	Hard Rocks, Inc.	Hard Rocks, Inc.	Kinsman		crushed or broken stone—aggregate	Tl-13
Tuscarawas	Kimble Clay & Limestone Co.	Kimble Limestone	Dover	Massillon (Pennsylvanian)	crushed or broken stone—construction	Ts-1818
	Pennsylvania Glass Sand Corp.	Coxey Works	Wayne		crushed or broken stone—foundry sand, fire and furnace sand, building	Ts-1660

[1]No mine number has been assigned by the Division of Mines.

1986 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Geological unit	Principal use	State mine number
Auglaize	Sandkuhl Tile Co.	Sandkuhl Tile Co.	Salem	Pleistocene glacial clay	common clay products	Ae-7
Greene	Southwestern Portland Cement Co.	Southwestern Portland Cement Co.	Bath	till	cement manufacture	Ge-8
Hocking	General Clay Products Corp.	General Clay Products Corp.	Falls Gore	No. 5 fire clay (Pennsylvanian)	vitrified products	Hg-205
Holmes	Clark Clay Co.	Clark Clay Co.	Hardy	Putnam Hill (Pennsylvanian)	common clay products	Hs-56
	Holmes Limestone Co.	241 Plant	Hardy	Brookville & Putnam Hill (Pennsylvanian)	common clay products	Hs-67
Jackson	Cedar Heights Clay Co.	Cedar Heights	Madison	No. 5 clay (Pennsylvanian)	refractories	Jkn-1007
	Waterloo Coal Co.	Zoar	Bloomfield, Madison	Kittanning (Pennsylvanian)	common clay products	Jkn-367
Lawrence	American Olean Tile Co., Inc.	Jefferys	Elizabeth	No. 5 clay (Pennsylvanian)	common clay products	Le-440
	Belville Mining Co.	Brady Creek	Washington		refractories	Le-403
Medina	General Clay Products Corp.	General Clay Products Corp.	Wadsworth		common clay products	Ma-6
Muskingum	Bowerston Shale Co.	Bowerston Shale Co.	Jackson	Flint Ridge & Middle Mercer (Pennsylvanian)	vitrified products	Mum-776
	Dennis Clay Co.	Corder Mine	Newton	No. 5 clay (Pennsylvanian)	common clay products, oil-well-plugging material	Mum-D[1]
	Hammer Clay Co., Inc.	Hammer Clay Co., Inc.	Newton		common clay products	Mum-848
Paulding	General Portland, Inc.	Paulding Quarry	Crane	Detroit River & upper Dundee (Devonian)	cement manufacture	Pg-1
Perry	Dennis Clay Co.	Cannon Mine	Harrison	No. 5 clay (Pennsylvanian)	common clay products	Py-296
		Browning Mine	Harrison	No. 6 clay (Pennsylvanian)	oil-well-plugging material	Py-331
	Nutter Bros. Coal Co., Inc.	Nutter Bros. Coal Co., Inc.	Monday Creek		common clay products	Py-259
Stark	C M Mining, Inc.	#1 C M Mine	Pike		refractories	Sk-214
	Holmes Limestone Co.	Bolivar Mine	Bethlehem	Brookville (Pennsylvanian)	common clay products	Sk-235
	Kohl Industries	Black Hawk	Bethlehem, Pike	Brookville, Putnam Hill, Vanport, & Lower Kittanning (Pennsylvanian)	refractories	Sk-217
	Romany Ceramics, Inc.	Romany Ceramics, Inc.	Pike	No. 4 clay (Pennsylvanian)	glazed ware	Sk-170
Tuscarawas	Belden Brick Co.	Wallick Pit	Franklin, Wayne	Brookville (Pennsylvanian)	common clay products	Ts-1841
		Moomaw Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1517
		Finzer-Belden	Sugar Creek	Brookville & Lower Kittanning (Pennsylvanian)	common clay products	Ts-1646
		Shanesville Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1939
		Beagle Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1960
	Eberhart Coal, Inc.	Eberhart #2 Hott Strip	Dover	Lower Kittanning (Pennsylvanian)	refractories	Ts-1882
	Kimble Clay & Limestone Co.	Kimble Limestone	Dover	Vanport (Pennsylvanian)	common clay products, refractories	Ts-1818
	L & M Minerals, Inc.	Evans	Mill, Rush, Warwick		common clay products, vitrified products	Ts-1884
	Stone Creek Brick Co.	Stone Creek Brick Co. Clay Mine	Jefferson		vitrified products	Ts-1557
	Zoar Mining Co.	Zoar Mining Co.	Sandy		common clay products	Ts-538
		Zoar Mining Co.	Sandy		common clay products	Ts-540
Wyandot	Claycraft Co.	Claycraft Plant #1 Clay Pit	Crane	alluvial clay	common clay products	Wt-7

[1]No mine number has been assigned by the Division of Mines.

1986 OHIO DIRECTORY OF SHALE-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Geological unit	Principal use	State mine number
Columbiana	Summitville Tiles, Inc.	Summitville Tiles, Inc.	Franklin		common clay products	Ca-205
Coshocton	General Clay Products Corp.	Drescher Pit	Crawford	Lower Kittanning (Pennsylvanian)	vitrified products, unspecified	Cn-787
Cuyahoga	Hydraulic Press Brick Co.	Hydraulic Press Brick Co.	City of Independence	Chagrin (Devonian)	lightweight aggregate	Cya-19
Harrison	Bowerston Shale Co.	Bowerston Shale Co.	Monroe	Conemaugh (Pennsylvanian)	vitrified products	Hn-152
Hocking	General Clay Products Corp.	General Clay Products Corp.	Falls Gore	No. 5 fire clay (Pennsylvanian)	vitrified products	Hg-205
Holmes	General Clay Products Corp.	Troyer Pit	Clark	Lower Kittanning (Pennsylvanian)	vitrified products	Hs-77
Lawrence	Lone Star-Marquette	Bear Run	Decatur	Vanport (Pennsylvanian)	cement manufacture	Le-308
Licking	Bowerston Shale Co.	Bowerston Shale Co.	Hanover	Logan (Mississippian)	vitrified products	Lg-501
Mahoning	SME Bessemer Cement, Inc.	Quarry #8	Poland	Vanport (Pennsylvanian)	cement manufacture	Mg-608
Marion	Glen-Gery Corp.	Glen-Gery Corp.	Tully	Bedford (Mississippian)	common clay products	Mn-7
Medina	General Clay Products Corp.	General Clay Products Corp.	Wadsworth		common clay products	Ma-6
Muskingum	Columbia Portland Cement Corp.	Lyle Quarry	Newton	Maxville (Mississippian)	cement manufacture	Mum-24
Noble	Towne Square Products	Towne Square Products	Buffalo		common clay products	Ne-66
Perry	Dennis Clay Co.	Browning Mine	Harrison	Pennsylvanian	road construction, fill	Py-331
Stark	Kohl Industries	Black Hawk	Bethlehem, Pike	Brookville, Putnam Hill, Vanport, & Lower Kittanning (Pennsylvanian)	lightweight aggregate	Sk-217
	Romany Ceramics, Inc.	Romany Ceramics, Inc.	Pike		glazed ware	Sk-170
Tuscarawas	Belden Brick Co.	Wallick Pit	Franklin, Wayne	Brookville & Strasburg (Pennsylvanian)	common clay products	Ts-1841
		Moomaw Pit	Sugar Creek	Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-1517
		Finzer-Belden	Sugar Creek	Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-1646
		Shanesville Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1939
	Kimble Clay & Limestone Co.	Kimble Limestone	Dover	Vanport (Pennsylvanian)	common clay products, construction	Ts-1818
	L & M Minerals, Inc.	Evans	Mill, Rush, Warwick		common clay products	Ts-1884
	Stone Creek Brick Co.	Stone Creek Brick Co. Shale Mine	Jefferson		vitrified products	Ts-1558
	Zoar Mining Co.	Zoar Mining Co.	Sandy		common clay products	Ts-538

1986 OHIO DIRECTORY OF GYPSUM-MINE OPERATORS REPORTING SALES OR PRODUCTION

County	Name of operator	Name of mine	Township	Geological unit	State mine number
Ottawa	Celotex Corp.	American No. 2	Portage	Silurian	Oa-2

1986 OHIO DIRECTORY OF SALT-MINE AND SALT-BRINING-PLANT OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Geological unit and product	State mine number
Cuyahoga	International Salt Co.	Cleveland Mine	City of Cleveland	Salina (Silurian)—rock salt	Cya-30
Lake	Morton Thiokol, Inc.	Fairport Mine	Painesville	Salina (Silurian)—rock salt	Lke-6
Licking	R. H. Penick Co.	R. H. Penick Co.	Newark	"Newburg" (Silurian)—natural brine	Lg-45
Summit	Diamond Crystal Salt Co.	Diamond Crystal Salt Co.	Coventry	Salina (Silurian)—artificial brine	St-9127
Wayne	Morton Thiokol, Inc.	Morton Salt Well Field	Milton	Salina (Silurian)—artificial brine	We-9129

1986 OHIO DIRECTORY OF PEAT-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Type and principal use	State mine number
Champaign	Sphagnum Moss Peat Farm	Sphagnum Moss Peat Farm	Harrison	mulch, humus—live-bait preservative	Cpn-9
Williams	Lingvai Peat Co.	Lingvai Peat Co.	Center	mulch	Ws-17
Wyandot	Kalo, Inc.	Kalo, Inc. Humus Plant	Crawford	humus—legume inoculation	Wt-14

NUMERICAL INDEX OF OPERATORS OF MINES SHOWN ON 1986 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY

COAL ● ○

Map location number	*County*	*Name of operator*
1	As	B & C Coal, Inc.
2	As	Nutter Bros. Coal Co., Inc.
3	Bt	Nacco Mining Co.
4	Bt	Cravat Coal Co.
5	Bt	Marietta Coal Co.
6	Bt	Ohio Coal & Construction Corp.
8	Bt	R & F Coal Co.
9	Bt	Bannock Coal Co.
10	Bt	Ohio River Collieries, Inc.
11	Bt	Cravat Coal Co.
12	Bt	Cravat Coal Co.
13	Bt	Marietta Coal Co.
14	Bt	R & F Coal Co.
15	Bt	R & F Coal Co.
16	Bt	Saginaw Mining Co.
17	Bt	Marietta Coal Co.
18	Bt	Ohio Coal & Construction Corp., Marietta Coal Co.
19	Bt	Fairpoint Coal Co.
20	Bt	Ohio River Collieries, Inc.
23	Bt	Joyce Coal Co.
24	Bt	R & F Coal Co.
25	Bt	Ohio River Collieries, Inc.
26	Bt	Cravat Coal Co.
27	Bt	Ohio River Collieries, Inc.
30	Bt	R & F Coal Co.
31	Bt	R & F Coal Co.
33	Bt	GEX Hardy, Inc.
35	Bt	Ohio Coal & Construction Corp.
36	Bt	Ohio River Collieries, Inc.
37	Bt	R & F Coal Co.
38	Bt	Marietta Coal Co.
39	Bt	Marietta Coal Co.
40	Bt	Marietta Coal Co.
42	Bt	Marietta Coal Co.
43	Bt	Ohio Coal & Construction Corp.
44	Bt	R & F Coal Co.
45	Bt	R & F Coal Co.
46	Bt	R & F Coal Co.
47	Bt	Cravat Coal Co.
48	Bt	Ohio Coal & Construction Corp.
49	Bt	Ohio Coal & Construction Corp.
51	Bt	K.C.C.I.
52	Bt	Cravat Coal Co.
54	Bt	Marietta Coal Co.
55	Bt	Bannock Coal Co.
56	Bt	R & F Coal Co.
57	Bt	R & F Coal Co.
58	Bt	Marietta Coal Co.
59	Cl	James Bros. Coal Co.
60	Cl	Midway Coal, Inc.
61	Cl	James Bros. Coal Co.
62	Cl	Puskarich Limestone Co.
64	Cl	Regal Mining, Inc.
66	Cl	Industrial Mining Co.
67	Cl	Industrial Mining Co.
68	Cl	Mac Mining Co.
69	Cl	Regal Mining, Inc.
70	Cl	Mac Mining Co.
71	Cl	Blum Coal Co.
73	Ca	K D Coal Co., Inc.
74	Ca	East Fairfield Coal Co.
75	Ca	Plate Coal Co.
77	Ca	Crawford Coal Co.
78	Ca	Commercial Minerals, Inc.
80	Ca	Coalbrook Mining, Inc.
81	Ca	M & S Coal Co., Inc.
82	Ca	D. & D. Mining Co.
84	Ca	D. & D. Mining Co.
85	Ca	D. & D. Mining Co.
86	Ca	D. & D. Mining Co.
88	Ca	Johnson Mining Co.
89	Ca	East Fairfield Coal Co.
90	Ca	Jeffco Sales & Mining Co.
92	Ca	Lisbon Coal Crushers, Inc.
94	Ca	Industrial Mining Co.
96	Ca	Hutson Road Mining Co.
97	Ca	Robinson & Sons Mining
98	Ca	Commercial Minerals, Inc.
101	Ca	P & J Mining Co.
102	Ca	Mansfield Hawk Mining, Inc.
103	Ca	Blum Coal Co.
104	Hs	Holmes Limestone Co.
105	Ca	M & S Coal Co., Inc.
106	Cn	G & M Mineral Co.
109	Cn	Schlabach Coal Co.
111	Cn	Ohio Amco, Inc.
112	Cn	Simco-Peabody
115	Cn	R & F Coal Co.
117	Cn	R & F Coal Co.
119	Cn	R & R Minerals, Inc.
120	Cn	R & F Coal Co.
121	Cn	R & F Coal Co.
122	Cn	R & F Coal Co.
123	Cn	R & F Coal Co.
124	Cn	R & F Coal Co.
125	Ga, Le	Crown City Mining, Inc.
126	Ga	Merco Mining, Inc.
127	Ga	Green & Burritt Coal Co., Inc.
128	Ga	Kymcoal, Inc.
130	Gy, Ts	R & F Coal Co.
132	Gy	R. V. G., Inc.
133	Gy	Thompson Mining Co.
134	Gy	L. & M. Coal Co.
136	Hn	Y & O Coal Co.
137	Bt, Hn	Consolidation Coal Co.
139	Hn	Fairpoint Coal Co.
140	Hn	R & F Coal Co.
141	Hn	C K & K, Inc.
143	Hn	T.P. Mining, Inc.
144	Hn	W.B. Coal Co.
145	Hn	R & F Coal Co.
146	Hn	Varkony Mining
147	Hn	R & F Coal Co.
148	Hn	Consolidation Coal Co.
149	Hn	W.B. Coal Co.
150	Hn	Consolidation Coal Co.
153	Hn	R & F Coal Co.
154	Hn	R & F Coal Co.
155	Hn	R & F Coal Co.
156	Hn	R & F Coal Co.
157	Hg	Valley Coal Co.
158	Hg	Valley Coal Co.
159	Hg	Quality Coal Co.
161	Hs	Holmes Limestone Co.
162	Hs	Holmes Limestone Co.
163	Hs	Miller Mining, Inc.
164	Hs	Holmes Limestone Co.
165	Jkn	Waterloo Coal Co.
166	Jkn	Royal Oak Industries, Inc.
167	Jkn	Milton Mining Co.
168	Jkn	Walton Coal Co., Inc.
169	Jkn	B & D Coal, Inc.
171	Jkn	Elk Coal Co., Inc.
172	Jkn	Stewart Coal Co.
174	Jkn	Quality Coal Co.
175	Jkn	LaMay Coal Co., Inc., LaMay Industries, Inc.
176	Jkn	Sands Hill Coal Co., Inc.
177	Jkn	Royal Oak Industries, Inc.
178	Jfn	Boich Mining Co.
179	Jfn	Schiappa Coal Co., Inc.
180	Jfn	Weirton Construction Co.
181	Jfn	Zimnox Coal Co.
182	Jfn	Ohio Coal & Construction Corp.
183	Jfn	R & F Coal Co.
185	Jfn	D & L Contractors, Inc.

COAL—Continued

Map location number	*County*	*Name of operator*
186	Jfn	F & M Coal Co.
187	Jfn	Valley Mining, Inc.
189	Jfn	Anthony Mining Co., Inc.
190	Jfn	Anthony Mining Co., Inc.
191	Jfn	Mackra Minerals
193	Jfn	Ohio Edison Co.
194	Jfn	Industrial Mining Co.
195	Jfn	Schiappa Coal Co., Inc.
196	Jfn	S. & D. Construction Corp.
197	Jfn	Ohio Coal & Construction Corp.
198	Sk	C M Mining, Inc.
199	Jfn	Jefferson Holding, Inc.
201	Jfn	R & F Coal Co.
202	Le	Belville Mining Co., Inc.
204	Mg	Ted Mesmer & Sons
205	Mg	Thompson Bros. Mining Co.
206	Mg	East Fairfield Coal Co.
207	Mg	SME Bessemer Cement, Inc.
210	Mg	East Fairfield Coal Co.
211	Mg	East Fairfield Coal Co.
212	Ms	Southern Ohio Coal Co.
213	Ms	Southern Ohio Coal Co.
215	Me	Quarto Mining Co.
216	Mum	Muskingum Mining, Inc.
217	Mum	King Quarries, Inc.
218	Mum	Sands Mining Corp.
222	Mum	Cravat Coal Co.
224	Mum	King Quarries, Inc.
228	Mum, Ne	Central Ohio Coal Co.
229	Ne	Bennoc, Inc.
230	Ne	B & N Coal, Inc.
231	Ne	B & N Coal, Inc.
232	Ne	R & F Coal Co.
233	Ne	B & N Coal, Inc.
234	Ne	R & F Coal Co.
235	Py	Peabody Coal Co.
236	Py	Peabody Coal Co.
239	Py	Crooksville Coal Co.
240	Py	Crooksville Coal Co. Strip-Tri-State Coal Sales, Inc.
241	Py	Star Mining Co., Inc.
242	Py	Shawnee Coal Co.
243	Py	Shawnee Coal Co.
245	Sk	Mansfield Hawk Mining, Inc.
246	Sk	ENZ, Inc.
248	Sk	Kohl Industries
250	Sk	Hillcrest Coal, Ltd.
251	Sk	Horizon Coal Corp.
252	Sk	K & R Mining, Inc.
254	Sk	Horizon Coal Corp.
255	Sk	East Ohio Limestone Co.
256	Ts	Empire Coal Co.
257	Ts	Zoar Mining Co.
258	Ts	Zoar Mining Co.
259	Ts	Eberhart Coal, Inc.
260	Ts	Eberhart Coal, Inc.
262	Ts	Kimble Clay & Limestone Co.
263	Ts	Eberhart Coal, Inc.
264	Ts	L & M Minerals, Inc.
265	Ts	Arrow Head Energy, Inc.
268	Ts	Puskarich Mining, Inc.
269	Ts	Red Malcuit, Inc.
270	Ts	Eberhart Coal, Inc.
274	Ts	Daron Coal Co.
275	Ts	R & E Coal Co.
276	Ts	L & M Minerals, Inc.
277	Ts	Burning Hollow Coal Co., Inc.
279	Ts	J D Mining, Inc.
280	Ts	Horizon Coal Corp.
282	Ts	R & F Coal Co.
283	Ts	GEX Hardy, Inc.
284	Ts	Miller Mining, Inc.
286	Ts	Angel Valley Mining, Inc.
287	Ts	Arapaho Mining, Inc.
288	Ts	Valley Mining, Inc.
289	Ts	DiChiera Coal Co.
290	Ts	Horizon Coal Corp.
291	Ts	Empire Coal Co.
292	Ts	Empire Coal Co.
293	Ts	Mudsock Minerals, Inc.
294	Vn	Eberts Coal Co., Inc., R. A. Eberts Co.
295	Vn	R & S Coal Co., Inc.
296	Vn	Elk Coal Co., Inc.
298	Vn	B & D Coal, Inc.
299	Vn	Sands Hill Coal Co., Inc.
300	Vn	Southern Ohio Coal Co.
301	Vn	Quality Coal Co.
303	Wn	B & N Coal, Inc.
304	Wn	B & N Coal, Inc.
306	Bt	Ohio Coal & Construction Corp.
307	Bt	J & W Mining Co.
308	Bt	R & F Coal Co.
309	Bt	Cravat Coal Co.
310	Bt	R & F Coal Co.
311	Bt	Bannock Coal Co.
312	Bt	R & F Coal Co.
313	Bt	R & F Coal Co.
314	Bt	R & F Coal Co.
315	Jfn	Jeffco Sales & Mining Co.
316	Ca	M & M Builder's Supply
317	Ca	Center Mining Co.
318	Ca	Lisbon Coal Crushers, Inc.
319	Ca	Mansfield Hawk Mining, Inc.
321	Ca	Blum Coal Co.
322	Ca	East Fairfield Coal Co.
323	Gy	R. V. G., Inc.
324	Hn	Dallas Vickers
325	Hn	R & F Coal Co.
326	Hn	Huberta Coal Co.
327	Hn	R & F Coal Co.
329	Hg	Daft Coal Co.
330	Hg	David Boyle, Inc.
331	Hg	Valley Coal Co.
332	Hs	Miller Mining, Inc.
333	Hs	Miller Mining, Inc.
334	Jkn	Stewart Construction Co.
335	Jfn	Ohio River Collieries, Inc.
336	Jfn	R & F Coal Co.
337	Jfn	Ohio Coal & Construction Corp.
338	Py	Seamco, Inc.
339	Py	Dennis Clay Co.
340	Sk	Mansfield Hawk Mining, Inc.
341	Sk	Wilmot Mining Co.
342	Sk	K & R Mining, Inc.
343	Ts	Miller Mining, Inc.
344	Ts	Daron Coal Co.
345	Ts	GEX Hardy, Inc.
346	Ts	J D Mining, Inc.
347	Ts	Cravat Coal Co.
348	Ts	R & F Coal Co.
349	Ts	Cravat Coal Co.
350	Ts	Miller Mining, Inc.
351	Ts	C K & K, Inc.
352	Ts	R & F Coal Co.
353	Ts	Arapaho Mining, Inc.
354	Ts	Valley Mining, Inc.
355	Vn	Benedict, Inc.
356	Vn	Benedict, Inc.
357	Vn	Benedict, Inc.
358	Vn	Benedict, Inc.
359	Vn	Quality Coal Co.
360	Cl	Regal Mining, Inc.
361	Ca	Johnson Mining Co.
363	Sk	Holmes Limestone Co.
364	Py	Star Mining Co., Inc.
365	Py	Knowlton Industries
366	Sk	Industrial Mining Co.
367	Ts	Sugarcreek Clay & Limestone, Inc.
368	Py	Transpacific Technology of Ohio
369	Ca	K D Coal Co., Inc.
370	Bt	Ohio Coal & Construction Corp.
371	Ca	Industrial Mining Co.
372	Ca	Industrial Mining Co.
373	Ca	Lisbon Coal Crushers, Inc.
374	Cn	Oxford Minerals, Inc.
375	Ts	R & F Coal Co.

COAL—Continued

Map location number	*County*	*Name of operator*
376	Bt	Loase Coal Co.
377	Ts	Vic Mining, Inc.
378	Ga	Kymcoal, Inc.
379	Jkn	Quality Coal Co.
380	Le	Collins Mining Co.
381	Ca	Cardinal Mining, Inc.
382	Jfn	Ohio Coal & Construction Corp.

LIMESTONE/DOLOMITE ■

Map location number	*County*	*Name of operator*
1	Ads	Davon, Inc.
2	Ads	Standard Slag Co.
3	An	Bluffton Stone Co.
4	An	National Lime & Stone Co.
5	An	National Lime & Stone Co.
6	An	National Lime & Stone Co.
7	An	Suever Stone Co., Inc.
8	As	Diamond Stone Quarries, Inc.
9	As	Diamond Stone Quarries, Inc.
10	Ae	Con-Ag, Inc.
11	Ae	National Lime & Stone Co.
12	Bt	Ayers Limestone Quarry, Inc.
13	Bt	Cravat Coal Co.
14	Bn	Brown County Rock Crusher
15	Cl	Puskarich Limestone Co.
16	Ck	American Aggregates Corp.
17	Cln	Melvin Stone Co.
18	Cd	National Lime & Stone Co.
19	Dke	American Aggregates Corp.
20	Del	American Aggregates Corp.
21	Del	National Lime & Stone Co.
22	Del	Owens Stone Co., Inc.
23	Del	Penry Stone Co.
24	Ee	Erie Blacktop, Inc.
25	Ee	Sandusky Crushed Stone Co., Inc.
26	Ee	Wagner Quarries Co.
27	Fe	American Aggregates Corp.
28	Fe	Melvin Stone Co.
29	Fe	Sugar Creek Stone Quarry, Inc.
30	Fn	American Aggregates Corp.
31	Fn	American Aggregates Corp.
32	Ge	American Aggregates Corp.
33	Ck, Ge	Southwestern Portland Cement Co.
34	Ge	Southwestern Portland Cement Co.
35	Hk	National Lime & Stone Co.
36	Hk	Pifer Stone Co.
37	Hk	Tarbox-McCall Stone Co.
38	Hdn	Hardin Quarry Co., Inc.
39	Hdn	Standard Slag Co.
41	Hd	Davon, Inc.
42	Hd	Ohio Asphaltic Limestone Corp.
43	Hd	Marshall Quarry, Inc.
44	Hs	Holmes Limestone Co.
45	Hs, We	Holmes Limestone Co.
46	Jkn	D & J Energy, Inc.
47	Jkn	Waterloo Coal Co.
49	Lgn	Connolly Construction Co., Inc.
50	Lgn	C. E. Duff & Son, Inc.
51	Lgn	Northwood Stone & Asphalt Co.
52	Ls	The France Stone Co.
53	Ls	The France Stone Co.
54	Ls	Stoneco
55	Mg	Heiser Stone Co.
56	Mg	Honey Creek Stone Co.
57	Mg	SME Bessemer Cement, Inc.
58	Mg	SME Bessemer Cement, Inc.
59	Mn	J. M. Hamilton & Sons Co.
60	Mn	National Lime & Stone Co.
61	Mn	Tri County Limestone Co.
62	Mr	John W. Karch Stone Co.
63	Mr	Rockford Stone Co.
64	Mi	Armco, Inc.
65	Mi	Gregory Stone, Inc.
66	Mi	Ludlow Stone, Inc.
67	Mi	C. F. Poeppelman Sand & Stone, Inc.
68	Mi	Tipp Stone, Inc.
69	Me	Gerald L. Christman
70	My	American Aggregates Corp.
71	My	American Aggregates Corp.
72	My	Southwestern Portland Cement Co.
73	Mon	Central Ohio Coal Co.
74	Mum	Central Ohio Coal Co.
75	Mum	Chesterhill Stone Co.
76	Mum	Columbia Portland Cement Corp.
78	Mum	Sidwell Bros., Inc.
79	Ne	King Limestone, Inc.
80	Me, Ne	Zerger's Quarry
81	Oa	Fox Stone Products, Inc.
82	Oa	Edward Kraemer & Sons, Inc.
83	Oa	Stoneco
84	Oa	Standard Slag Co.
85	Oa	USG Industries, Inc.
86	Pg	The France Stone Co.
87	Pg	General Portland, Inc.
88	Pg	Stoneco
89	Py	Maxville Stone Co.
90	Py	Somerset Lime & Stone, Inc.
91	Pke	Latham Limestone, Inc.
92	Pky	Melvin Stone Co.
94	Pre	American Aggregates Corp.
95	Pre	Wysong Stone Co.
98	Pm	Putnam Stone Co., Inc.
100	Sy	The France Stone Co.
101	Sy	Gottron Bros. Co.
102	Sy	Martin Marietta Chemicals
103	Sy	Ohio Lime Co.
104	Sy	Steetley Resources, Inc.
105	Sy	Steetley Resources, Inc.
106	Sa	Basic Refractories
107	Sa	The France Stone Co.
108	Sa	The France Stone Co.
109	Sa	North Shore Stone Quarries, Inc.
110	Shy	Miami River Stone Co.
111	Shy	Sidney Sand & Gravel Co.
112	Shy	Spring Creek Corp.
113	Sk	East Ohio Limestone Co.
114	Sk	Kohl Industries
115	Sk	SME Cement, Inc.
116	Ts	Belden Brick Co.
117	Ts	Kimble Clay & Limestone Co.
118	Ts	Sugarcreek Clay & Limestone, Inc.
119	Un	L. G. Rockhold & Sons, Inc.
120	Un	Union Aggregates Co.
121	Vt	Stoneco
122	Vt	Ridge Township Quarry
123	Vt	Suever Stone Co., Inc.
124	Vn	Clinton Stone Co.
125	Wan	American Aggregates Corp.
126	Wn	Guernsey Limestone Co., Inc.
128	Wd	The France Stone Co.
129	Wd	The France Stone Co.
130	Wd	MacRitchie Materials, Inc.
131	Wd	Stoneco
132	Wd	Stoneco
133	Wt	McCarthy Stone Quarry
134	Wt	National Lime & Stone Co.
135	Wt	Wyandot Dolomite, Inc.
136	Ts	Fuhrer Farms & Mining
137	Py	Crooksville Coal Co.
138	Ne	Central Ohio Coal Co.
139	Kx	Mickley Gravel Co.
140	Le	Belville Mining Co.

SAND AND GRAVEL DREDGING OPERATION ▲

Map location number	*Name of operator*
1	Erie Sand & Gravel Co.
2	Osborne Materials Co.
3	White Bros. Sand, Inc.

SAND AND GRAVEL ▲

Map location number	*County*	*Name of operator*
1	An	Rockport Sand & Gravel Co., Inc.
2	An	Rockport Sand & Gravel Co., Inc.
3	Ald	Charles Bucklew Sand & Gravel Co.
4	Ald	Jones Trucking Co.
5	Ald	Alvin Keiffer Trucking & Excavating
6	Ald	Ries Sand & Gravel
7	Ald	Simanton Sand Co.
8	Ald	Young's Sand & Gravel Co.
9	Asa	Frye Sand & Gravel, Inc.
10	Asa	Janson's Soil Service
11	Asa	Kinsman Sand & Gravel Co.
12	Asa	Meade Materials
13	Asa	Nelson Sand & Gravel, Inc.
14	Asa	Nelson Sand & Gravel, Inc.
15	Asa	R. W. Sidley, Inc.
16	Asa	R. W. Sidley, Inc.
17	Asa	Skidmore & Chah, Inc.
18	As	Athens Building Materials Co., Inc.
19	As	Black Top Contracting, Inc.
20	As	C. D. Materials
21	As	Lake Hope Asphalt, Inc.
23	Ae	Joseph Sand & Gravel
24	Ae	National Lime & Stone Co.
25	Ae	Quality Ready Mix, Inc.
26	Bt	Tri-State Asphalt Products
27	Bn	Ruggles Stone Co.
28	Br	Aggregate Services, Inc.
29	Br	American Aggregates Corp.
30	Br	American Aggregates Corp.
31	Br	Broshear Gravel Co.
32	Br	Dingledine Sand & Gravel
33	Br	Dravo Basic Materials Co., Inc.
34	Br	Dravo Basic Materials Co., Inc.
35	Br	Fairfield Ready Mix
36	Br	Fairfield Ready Mix
37	Br	Indian Creek Sand & Gravel Co.
38	Br	Martin Farms, Inc.
39	Br	Mecco, Inc.
40	Br	Middletown Sand & Gravel Co.
41	Br	Moorman Sand & Gravel Co., Weidle Sand & Gravel, Inc.
42	Br	New Miami Sand & Gravel, Inc.
43	Br	Tri County Sand & Gravel
44	Br	Watson Gravel, Inc.
45	Br	Welch Sand & Gravel, Inc.
46	Cl	National Aggregate
47	Cl	Oneida Sand & Gravel, Inc.
48	Cpn	American Aggregates Corp.
49	Cpn	D & W Gravel Co.
50	Cpn	Mechanicsburg Sand & Gravel, Inc.
51	Cpn	Moore's Excavating Co.
52	Ck	American Aggregates Corp.
53	Ck	County Line Sand & Gravel
54	Ck	Demmy Sand & Gravel
55	Ck	Dinnen Sand & Gravel
56	Ck	Eagle City Sand & Gravel Co.
57	Ck	Enon Washed Sand & Gravel Co.
58	Ck	Springfield Sand & Gravel Co.
59	Ct	The Brewer Company
60	Ct	Howerton Supply Co.
61	Ct	Kipp's Gravel Co., Inc.
62	Ct	OKI Contracting, Inc.
63	Cln	The Gravel Co.
64	Ca	Beaver Creek Sand & Gravel, Inc.
65	Ca	Ferris Coal Co., Inc.
67	Ca	Neiheisel Sand & Gravel
68	Ca	X L Sand & Gravel
69	Cn	Apache Aggregate & Paving Co.
70	Cn	Apache Aggregate & Paving Co.
71	Cn	Boyd Gravel Co.
73	Cn	Wentz Concrete & Supply, Inc.
74	Cd	Galion Materials
75	Cd	Gibson Sand & Gravel Co.
76	Cya	Silver Arrow Systems, Inc.
78	Dke	American Aggregates Corp.
79	Dke	Feitshans Gravel
80	Dke	Foureman's Sand & Gravel, Inc.
81	Dke	Hollinger Gravel Plant
82	De	Hillsdale Sand & Gravel, Inc.
83	Ee	Elmer Borchardt, Inc.
84	Ee	Jarrett Sand Co.
85	Ee	Keener Sand & Clay Co.
86	Ee	Mesenburg Bros., Inc.
87	Ee	Miller Sand Co.
91	Fd	Davis Sand & Gravel
92	Fd	Lancaster Sand & Gravel Co.
93	Fd	George E. Williams Excavating, Inc.
94	Fn	Agg Rok Materials
95	Fn	American Aggregates Corp.
96	Fn	American Aggregates Corp.
97	Fn	Big Walnut Sand & Gravel Co.
98	Fn	J. P. Sand & Gravel Co.
99	Fn	L & M Excavators, Inc.
100	Fn	Masons Sand & Gravel Co.
101	Fn	Muskingum River Gravel Co.
102	Fn	Olen Corp.
103	Ftn	Kenneth Leupp Gravel
105	Ga	M. T. Epling Co.
106	Ga	M. T. Epling Co.
107	Ga	Keener Sand & Clay Co.
108	Gea	Haueter Sand & Gravel Co.
109	Gea	Teague Gravel Co., Inc.
110	Ge	American Aggregates Corp.
111	Ge	Ernst Aggregates, Inc.
112	Ck, Ge	Hilltop Basic Resources, Inc.
113	Ge	Moraine Materials, Inc.
114	Ge	Moraine Materials, Inc.
115	Ge	Phillips Sand & Gravel
116	Ge	S & W Cement Contractors, Inc.
117	Ge	Xenia Sand, Gravel, & Asphalt Paving Co.
118	Hmn	American Aggregates Corp.
119	Hmn	American Aggregates Corp.
120	Hmn	Ashcraft Sand & Gravel
121	Hmn	Barrett Paving Materials, Inc.
123	Hmn	James Bunnell, Inc.
124	Hmn	James Bunnell, Inc.
126	Hmn	Dravo Basic Materials Co., Inc.
127	Hmn	Dravo Basic Materials Co., Inc.
128	Hmn	Dravo Basic Materials Co., Inc.
129	Hmn	Dravo Basic Materials Co., Inc.
130	Hmn	Dravo Basic Materials Co., Inc.
131	Hmn	Dravo Basic Materials Co., Inc.
132	Hmn	Eaton Sand & Gravel, Inc.
133	Hmn	Don Evans Sand & Gravel
134	Hmn	Don Evans Sand & Gravel
135	Hmn	Harrison Sand & Gravel Co.
136	Hmn	Hornsby Sand & Gravel Co.
137	Hmn	Bertha A. Leonard
138	Hmn	Queen City Gravel Co.
139	Hmn	Rack Sand, Inc.
140	Hmn	T & J Sand & Gravel, Inc.
141	Hmn	Three Rivers Sand & Gravel, Inc.
142	Hmn	Watson Gravel, Inc.
143	Hmn	Welch Sand & Gravel, Inc.
144	Hmn	Welch Sand & Gravel, Inc.
145	Hmn	Gary Golsch
146	Hmn	Welch Sand & Gravel, Inc.
147	Hy	Gerken Materials, Inc.
150	Hg	Hocking County Engineer
151	Hg	Hocking Valley Concrete, Inc.
152	Hg	S & S Aggregate
153	Hs	Bros. Sand & Gravel Co.
154	Hs	Feikert Sand & Gravel, Inc.
156	Hrn	Montgomery Sand Co.
157	Hrn	Price Sand & Gravel
159	Kx	Fredericktown Sand & Gravel Co.

SAND AND GRAVEL—Continued

Map location number	*County*	*Name of operator*
160	Kx	Goodwin Sand & Gravel, Inc.
161	Kx	Kokosing Materials, Inc.
162	Kx	Mickley Gravel Co.
163	Kx	Purdy Sand & Gravel Co.
164	Kx	Small's Sand & Gravel, Inc.
165	Kx	Small's Sand & Gravel, Inc.
166	Lke	R. W. Sidley, Inc.
167	Le	Becky Lane Trucking, Inc.
170	Le	Burlington Sand & Gravel Co.
171	Le	Economy Sand Co.
172	Le	Pine Creek Materials, Inc.
173	Lg	Alexandria Materials Co., Newark Asphalt Co.
174	Lg	American Aggregates Corp.
175	Lg	Dry Creek Gravel Co.
176	Lg	Dry Creek Gravel Co.
177	Lg	Dry Creek Gravel Co.
178	Lg	Rockport Sand & Gravel Co., Inc.
179	Lg	Van Wey Sand & Gravel, Inc.
180	Lg	Walter's Gravel
181	Lg	York Road Gravel Co.
182	Lgn	C. E. Duff & Son, Inc.
183	Lgn	C. E. Duff & Son, Inc.
184	Lgn	Groves Gravel Co.
185	Lgn	Johnson Gravel Co.
186	Lgn	Doug Kneedler
187	Lgn	Doug Kneedler
189	Lgn	Neer's Sand & Gravel
190	Lgn	Dennis Winzeler
191	Ln	Belu & Son Paving, Inc.
192	Ls	H. T. Griffin Excavating
193	Ls	Maumee Haulers, Inc.
194	Ls	Parker Sand & Stone, Inc.
195	Ls	Seaway Sand & Stone, Inc.
196	Mg	Neiheisel Sand & Gravel
197	Mn	Fleming Construction Co.
198	Mn	Penry Stone Co.
199	Mn	Rialto Farms
200	Mn	Union Aggregates Co.
201	Mn	Union Aggregates Co.
202	Ma	Baker Sand, Inc.
203	Ma	Baker Sand, Inc.
205	Ma	Ramsier Sand & Gravel
206	Ma	Seville Sand & Gravel, Inc.
207	Ma	Seville Sand & Gravel, Inc.
208	Ma	Silchuk Gravel Co.
209	Ms	Dravo Basic Materials Co., Inc.
210	Ms	Humphrey Farms
211	Ms	Meigs County Commissioners
212	Ms	Richards & Son, Inc.
213	Ms	Weber Sand & Gravel
214	Mi	American Aggregates Corp.
215	Mi	Eldean Gravel Co.
216	Mi	Ernst Gravel Co.
217	Mi	New Carlisle Sand & Gravel Co.
218	Mi	Tipp Stone, Inc.
219	Mi	Troy Gravel Co.
220	Mi	Valley Gravel Co.
221	Mi	John Wise Gravel Co.
222	Mi	Woodville Concrete Corp.
223	My	American Aggregates Corp.
224	My	American Aggregates Corp.
225	My	Broadway Sand & Gravel, Inc.
228	My	Carpenter's Excavating
229	My	H & H Utilities Co.
230	My	Englewood Sand & Gravel Co., Inc.
231	My	Haas Gravel Co.
232	My	Hilltop Basic Resources, Inc.
233	My	Miller Bros. Gravel, Inc.
234	My	Moraine Materials, Inc.
235	My	Northmont Sand & Gravel Co.
236	My	Partin Sand & Gravel
237	My	Southern Hills Supply, Inc.
238	My	Tipp Stone, Inc.
239	My	Weidle Sand & Gravel, Inc.
240	Mon	Chesterhill Stone Co.
241	Mon	Lewis Huck
242	Mw	Chesterville Sand & Gravel Co., Inc.
243	Mum	Cox Gravel, Inc.
244	Mum	Cox Gravel, Inc.
245	Mum	Muskingum River Gravel Co.
246	Mum	Muskingum River Gravel Co.
247	Mum	Muskingum River Gravel Co.
248	Mum	Salt Creek Materials, Inc.
249	Mum	Salt Creek Materials, Inc.
251	Pky	Sturm & Dillard Co.
252	Pke	C. D. Materials
253	Pke	Chattin Concrete
254	Pke	Gregory Materials Co.
255	Pke	Standard Slag Co.
256	Pe	Beck Sand & Gravel, Inc.
257	Pe	Karl Brugmann Sand & Gravel
258	Pe	Oscar Brugmann Sand & Gravel, Inc.
259	Pe	Charlestown Sand & Gravel Co.
260	Pe	Copley Sand & Gravel Co.
261	Pe	R. A. Cruise Sand & Gravel, Inc.
262	Pe	Hilltop Aggregate, Inc.
263	Pe	Warner L. Hughes, Inc.
264	Pe	Hugo Sand Co.
265	Pe	Jefferson Materials Co.
266	Pe	Karg Sand & Gravel Co.
267	Pe	Karg Sand & Gravel Co.
268	Pe	Lakeside Sand & Gravel Co.
269	Pe	Lappin's Farm
270	Pe	W. G. Lockhart & Sons
271	Pe	Lucky Sand & Gravel Co.
272	Pe	Miller Sand & Gravel Co.
273	Pe	Northern Ohio Materials, Inc.
274	Pe	Schloss Paving Co.
275	Pe	Sober Sand & Gravel Co.
276	Pe	Solon Excavators Sand & Gravel, Inc.
277	Pe	Standard Slag Co.
278	Pe	Standard Slag Co.
280	Pe	Terra Vista Sand & Gravel Co.
281	Pe	S & S Aggregate, Twin Lakes Sand, Inc.
282	Pe	S & S Aggregate, Twin Lakes Sand, Inc.
283	Pe	Michael Palumbo
284	Pre	Southern Ohio Aggregates
285	Pre	Wysong Gravel Co.
286	Pre	Wysong Gravel Co.
287	Rd	D. H. Bowman & Sons, Inc.
289	Rd	Ganges Gravel
290	Rd	John L. Garber Materials, Inc.
291	Rd	Mohican Materials Co.
292	Rd	Mohican Sand & Gravel, Inc.
293	Rs	Three Locks Construction Co.
296	Rs	Joe Dresbach Farms
297	Rs	Elm Spring Farm
298	Rs	Haubeil & Sons Asphalt & Materials, Inc.
299	Rs	Muskingum River Gravel Co.
300	Rs	R & R Aggregates, Inc.
301	Sy	C. R. Gill Construction
302	Sy	Whitehall Farms, Inc.
303	So	E. E. Blair Construction Co.
304	So	Cunningham Asphalt Paving, Inc.
305	So	Earl H. Schilling & Sons, Inc.
306	So	Standard Slag Co.
307	Sa	Wright Sand
309	Shy	Ernst Gravel Co.
310	Shy	Fleckenstein Farm Gravel Pit
311	Shy	Miami River Stone Co.
312	Shy	Sidney Sand & Gravel Co.
314	Shy	Spring Creek Corp.
315	Shy	Spring Creek Corp.
316	Sk	Allied Corp.
317	Sk	Stone Products, Inc.
318	Sk	Canton Aggregate
319	Sk	Canton Aggregate
320	Sk	A. J. Diana Sons, Inc.
321	Sk	Hartville Sand & Gravel, Inc.
322	Sk	Heiser Sand & Gravel
323	Sk	Heiser Sand & Gravel
325	Sk	Massillon Washed Gravel Co.
326	Sk	Oster Sand & Gravel, Inc.
327	St	Flesher Sand & Gravel, Inc.
328	St	Jackie Lee Enterprises, Inc.

SAND AND GRAVEL—Continued

Map location number	County	Name of operator
329	St	Lerkis Asphalt Co., Inc.
330	St	H. M. Miller Construction Co.
331	St	Northern Ohio Materials, Inc.
332	St	Portage Lakes Sand & Gravel Co.
333	St	Riverside Sand & Gravel Co., Inc.
334	St	Rubber City Sand & Gravel Co.
335	St	Spring Valley Investments, Inc.
336	St	S & S Aggregate, Twin Lakes Sand, Inc.
337	St	S & S Aggregate, Twin Lakes Sand, Inc.
338	St	S & S Aggregate, Twin Lakes Sand, Inc.
340	Asa, Tl	Samco, Inc.
342	Ts	Oster Sand & Gravel, Inc.
343	Ts	Soehnlen Bros. Sand & Gravel Co.
344	Ts	Spring Industries
345	Ts	Spring Industries
346	Ts	Stewart & Reichman, Inc.
347	Ts	Stocker Sand & Gravel Co.
348	Ts	Stocker Sand & Gravel Co.
349	Wan	American Aggregates Corp.
350	Wan	Bellbrook Gravel Co.
351	Wan	Watson Gravel, Inc.
352	Wan	Dravo Basic Materials Co., Inc., Carl E. Oeder & Sons Sand & Gravel
353	Wan	Embro, Inc.
354	Wan	Hornsby Sand & Gravel Co.
355	Wan	Hornsby Sand & Gravel Co.
356	Wan	J & J Davenport
357	Wan	L & I Trucking & Construction, Inc.
358	Wan	Moraine Materials, Inc.
359	Wan	Morrow Gravel Co.
360	Wan	Morrow Gravel Co.
361	Wan	Morrow Gravel Co.
363	Wan	Watson Gravel, Inc.
364	Wn	Beverly Slag Co.
365	Wn	Briggs Sand & Gravel, Inc.
366	Wn	Chesterhill Stone Co.
367	Wn	Muskingum River Gravel Co.
368	Wn	Muskingum River Gravel Co.
369	Wn	Trout Sand & Gravel Co.
370	Wn	Union Slag Corp.
371	Wn	Union Slag Corp.
372	We	Prairie Lane Sand & Gravel Co.
373	We	Rupp Construction, Inc.
374	We	Zollinger Sand & Gravel Co.
375	Ws	Stoneco
376	Ws	Stoneco
377	De, Ws	Weber Sand & Gravel, Inc.
378	Ws	Dennis Winzeler
379	Wt	Amert Gravel Co.
380	Wt	H & M Sand & Gravel Co.
381	Wt	H & M Sand & Gravel Co.
382	Wt	Kirby's Sand & Gravel, Inc.
383	Wt	Homer Sammet Trucking
384	St	Portage Lakes Sand & Gravel Co.
385	Ck	William H. Young
386	Sk	American Sand & Gravel
387	Pe	American Sand & Gravel
388	Le	D & D Sand Bank Co.
389	Ts	Benco Leasing, Inc.
390	Mi	Ticon Corp.
391	Wan	Daniel L. Browning
392	My	Englewood Sand & Gravel Co., Inc.
393	Asa	North Ridge Materials
394	Asa	Joe Simak & Sons Trucking, Inc.
395	So	Scioto Valley Resources
396	Mum	Lazy Acre Farms, Inc.
397	Ts	Heiser Stone Co.
398	Gea	Van Ness Landscaping
399	Mdn	Yoder Farms Aggregates
400	Lg	Dry Creek Gravel Co.

SANDSTONE/CONGLOMERATE ▼

Map location number	County	Name of operator
1	Cl	Conotton Valley Quarries Co.
2	Sk	Kohl Industries
3	Ca	Beaver Creek Sand & Gravel, Inc.
4	Cn	Briar Hill Stone Co.
5	Cn	Briar Hill Stone Co.
6	Cn	Briar Hill Stone Co.
7	Cn	Briar Hill Stone Co.
8	Cn	Briar Hill Stone Co.
9	Cn	Briar Hill Stone Co.
11	Cn	Briar Hill Stone Co.
12	Cn	Briar Hill Stone Co.
13	Cya	Boyas Excavating, Inc.
14	Ee	Cleveland Quarries Co.
15	Ee	Harris Excavating Co.
16	Gea	Best Silica Co.
17	Gea	Best Sand Corp.
18	Gea	R. W. Sidley, Inc.
19	Hs	Briar Hill Stone Co.
20	Hrn	Mesenburg Bros., Inc.
21	Jkn	Mineral Research & Recovery of Ohio, Inc.
22	Kx	Briar Hill Stone Co.
23	Kx	Briar Hill Stone Co.
24	Kx	Central Silica Co.
26	Lg	Walter's Gravel
27	Ln	Cleveland Quarries Co.
28	Ln	Konik Excavating
29	Ma	Koontz Sandstone Co.
30	Mg	Gwin Contracting Co.
31	Py	Central Silica Co.
32	Ts	Belden Brick Co.
34	Rs	Southern Silica, Inc.
35	So	Taylor Stone Co., Inc.
36	So	Waller Bros. Stone Co.
37	So	Waller Bros. Stone Co.
38	So	Waller Bros. Stone Co.
39	Sk	C M Mining, Inc.
40	Tl	Hard Rocks, Inc.
41	Ts	Kimble Clay & Limestone Co.
42	Ts	Pennsylvania Glass Sand Corp.
43	Wn	Alan Stone Co., Inc.
44	Cn	Briar Hill Stone Co.
45	Pke	Schrader Sand & Gravel

SHALE/CLAY □

Map location number	County	Name of operator
1	Ald	London Tile Co.
2	Ae	Sandkuhl Tile Co.
4	Ca	Ferris Coal Co., Inc.
5	Ca	Summitville Tiles, Inc.
6	Cn	General Clay Products Corp.
7	Cya	Hydraulic Press Brick Co.
9	Fn	Claycraft Co.
10	Ge	Southwestern Portland Cement Co.
11	Hn	Bowerston Shale Co.
12	Hg	General Clay Products Corp.
13	Hg	Kishler Coal & Clay Co.
14	Hg	Kishler Coal & Clay Co.
17	Hs	Clark Clay Co.
18	Hs	General Clay Products Corp.
19	Hs	Holmes Limestone Co.
20	Jkn	Paul Adams Coal Co.
21	Jkn	Cedar Heights Clay Co.
22	Jkn	Cedar Heights Clay Co.
23	Jkn	Waterloo Coal Co.
24	Le	American Olean Tile Co., Inc.

SHALE/CLAY—Continued

Map location number	*County*	*Name of operator*
25	Le	Belville Mining Co.
29	Le	Chaney Mining Co.
30	Le	Lone Star-Marquette
31	Lg	Bowerston Shale Co.
33	Mg	SME Bessemer Cement, Inc.
34	Mg	SME Bessemer Cement, Inc.
35	Mg	Thompson Bros. Mining Co.
36	Mn	Glen-Gery Corp.
37	Ma	General Clay Products Corp.
38	Mum	Bowerston Shale Co.
39	Mum	Columbia Portland Cement Corp.
40	Mum	Hammer Clay Co., Inc.
41	Ne	Towne Square Products
42	Pg	General Portland, Inc.
43	Py	Dennis Clay Co.
44	Py	Kishler Coal & Clay Co.
45	Py	Kishler Coal & Clay Co.
46	Py	Ludowici Celadon Co.
47	Py	Nutter Bros. Coal Co., Inc.
48	Pm	Miller Bros. Clay Works, Inc.
50	Sk	C M Mining, Inc.
52	Sk	East Ohio Limestone Co.
53	Sk	Kohl Industries
54	Sk	SME Cement, Inc.
55	Sk	Romany Ceramics, Inc.
56	Ts	Belden Brick Co.
57	Ts	Belden Brick Co.
58	Ts	Belden Brick Co.
59	Ts	Belden Brick Co.
60	Ts	Belden Brick Co.
61	Ts	Eberhart Coal, Inc.
62	Ts	Fairfield Brick Co.
63	Ts	Kimble Clay & Limestone Co.
64	Ts	L & M Minerals, Inc.
65	Ts	L & M Minerals, Inc.
66	Ts	L & M Minerals, Inc.
67	Ts	Stone Creek Brick Co.
69	Ts	Sugarcreek Clay & Limestone, Inc.
70	Ts	Zoar Mining Co.
71	Ts	Zoar Mining Co.
72	We	Orrville Tile & Flue Lining, Inc.
73	Wt	Claycraft Co.
74	Mum	Dennis Clay Co.
75	Py	Dennis Clay Co.
76	Sk	Holmes Limestone Co.

GYPSUM ◆

Map location number	*County*	*Name of operator*
1	Oa	Celotex Corp.

SALT ◧ ◨

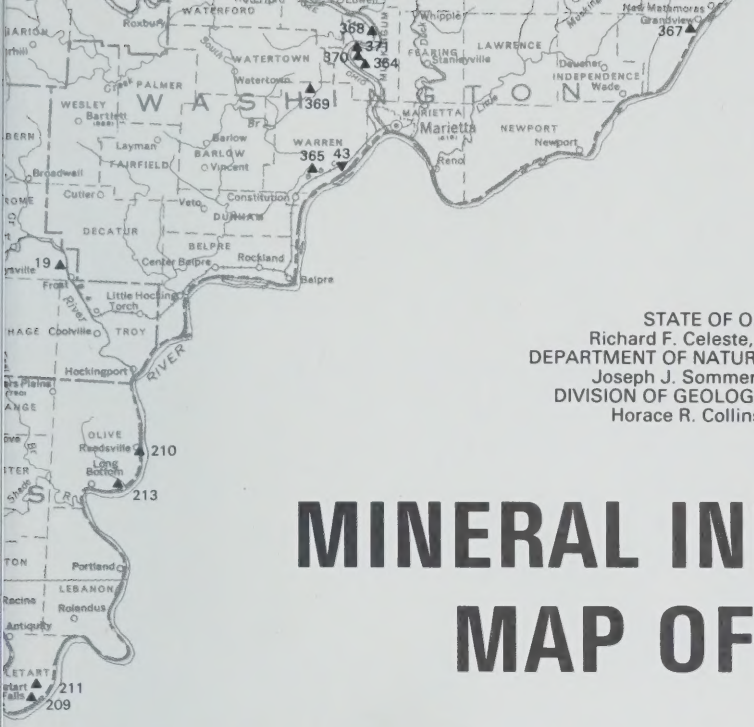
Map location number	*County*	*Name of operator*
1	Cya	International Salt Co.
2	Lke	Morton Thiokol, Inc.
3	Lg	R. H. Penick Co.
4	St	Diamond Crystal Salt Co.
5	We	Morton Thiokol, Inc.

PEAT ◇

Map location number	*County*	*Name of operator*
1	Ald	Mohican Organic Products, Inc.
2	Cpn	Sphagnum Moss Peat Farm
3	Lgn	Weaver's Peat Co.
4	Ws	Lingvai Peat Co.
5	Wt	Kalo, Inc.

OHIO COUNTY ABBREVIATIONS

County	*Abbreviation*	*County*	*Abbreviation*	*County*	*Abbreviation*
Adams	Ads	Hamilton	Hmn	Noble	Ne
Allen	An	Hancock	Hk	Ottawa	Oa
Ashland	Ald	Hardin	Hdn	Paulding	Pg
Ashtabula	Asa	Harrison	Hn	Perry	Py
Athens	As	Henry	Hy	Pickaway	Pky
Auglaize	Ae	Highland	Hd	Pike	Pke
Belmont	Bt	Hocking	Hg	Portage	Pe
Brown	Bn	Holmes	Hs	Preble	Pre
Butler	Br	Huron	Hrn	Putnam	Pm
Carroll	Cl	Jackson	Jkn	Richland	Rd
Champaign	Cpn	Jefferson	Jfn	Ross	Rs
Clark	Ck	Knox	Kx	Sandusky	Sy
Clermont	Ct	Lake	Lke	Scioto	So
Clinton	Cln	Lawrence	Le	Seneca	Sa
Columbiana	Ca	Licking	Lg	Shelby	Shy
Coshocton	Cn	Logan	Lgn	Stark	Sk
Crawford	Cd	Lorain	Ln	Summit	St
Cuyahoga	Cya	Lucas	Ls	Trumbull	Tl
Darke	Dke	Madison	Mdn	Tuscarawas	Ts
Defiance	De	Mahoning	Mg	Union	Un
Delaware	Del	Marion	Mn	Van Wert	Vt
Erie	Ee	Medina	Ma	Vinton	Vn
Fairfield	Fd	Meigs	Ms	Warren	Wan
Fayette	Fe	Mercer	Mr	Washington	Wn
Franklin	Fn	Miami	Mi	Wayne	We
Fulton	Ftn	Monroe	Me	Williams	Ws
Gallia	Ga	Montgomery	My	Wood	Wd
Geauga	Gea	Morgan	Mon	Wyandot	Wt
Greene	Ge	Morrow	Mw		
Guernsey	Gy	Muskingum	Mum		



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Richard F. Celeste, Governor
DEPARTMENT OF NATURAL RESOURCES
Joseph J. Sommer, Director
DIVISION OF GEOLOGICAL SURVEY
Horace R. Collins, Chief

MINERAL INDUSTRIES MAP OF OHIO

1986

COMPILED BY

SHERRY L. WEISGARBER
AND
CLARK L. SCHEERENS

This map is a revision of the 1977 publication *Mineral industries map of Ohio* and is intended for general reference. This edition is based on operators listed in the *1986 Report on Ohio mineral industries*. Assistance with locations was received from the Ohio Department of Natural Resources, Division of Reclamation.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL SURVEY
1837-1987 150 YEARS OF SERVICE

OGRAPHERS: MICHAEL R. LESTER
ROBERT L. STEWART

39°

81°

CANADA
MICHIGAN
INDIANA
PENNSYLVANIA
LAKE ERIE
84°
83°
82°
81°
42°
41°
39°
CLEVELAND
TOLEDO
YOUNGSTOWN
AKRON
CANTON
ALLIANCE
WILLIAMS
FULTON
LUCAS
OTTAWA
SANDUSKY
ERIE
LORAIN
CUYAHOGA
LAKE
GEAUGA
ASHTABULA
TRUMBULL
PORTAGE
SUMMIT
MEDINA
DEFIANCE
HENRY
WOOD
SENECA
HURON
PAULDING
PUTNAM
HANCOCK
VAN WERT
ALLEN
WYANDOT
CRAWFORD
RICHLAND
ASHLAND
WAYNE
STARK
MAHONING
COLUMBIA
MERCER
AUGLAIZE
HARDIN
MARION
MORROW
KNOX
HOLMES
CARROLL
SHELBY
LOGAN
UNION
DELAWARE
CHAMPAIGN
DARKE
MIAMI
CLARK
SPRINGFIELD
MADISON
FRANKLIN
LICKING
COSHOCTON
TUSCARAWAS
HARRISON
BELMONT
PREBLE
MONTGOMERY
GREENE
DAYTON
PICKAWAY
FAIRFIELD
MUSKINGUM
GUERNSEY
NOBLE
MONROE
BUTLER
WARREN
CLINTON
FAYETTE
ROSS
PERRY
MORGAN
WASHINGTON
HAMILTON
CINCINNATI
CLERMONT
BROWN
HIGHLAND
PIKE
JACKSON
VINTON
MEIGS
ATHENS
ADAMS
SCIOTO
GALLIA
LAWRENCE
Toledo
Cleveland
Akron
Canton
Youngstown
Columbus
Cincinnati
Dayton
Zanesville
Marietta
Pittsburgh
Philadelphia
Toronto
Pymatuning Reservoir
Kelleys Island
Put-in-Bay
Port Clinton
Sandusky
Norwalk
Bellevue
Fremont
Findlay
Defiance
Napoleon
Bowling Green
Lima
Wapakoneta
Kenton
Bellefontaine
Sidney
Piqua
Troy
Urbana
Springfield
Xenia
Middletown
Hamilton
Oxford
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Greenville
Van Wert
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Celina
Coldwater
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